

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 290TVP01
Application No. A000290

Issue Date: November 10, 2003
Expiration Date: December 31, 2008

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Teck Cominco Alaska, Incorporated**, for the operation of the **Red Dog Mine Facility**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All facility-specific terms and conditions of Air Quality Control Permit-to-Operate No. 9332-AA003 Amendment 2 and Air Quality Control Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005 Rev. 2 have been incorporated into this Operating Permit.

This Operating Permit becomes effective January 1, 2004.

John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ACFM	Actual Cubic Feet per Minute
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
CSB	Concentrate Storage Building
dscf	Dry standard cubic foot
EPA	US Environmental Protection Agency
gr./dscf	grain per dry standard cubic foot (1 pound = 7000 grains)
GPH	gallons per hour
HAPs or HACs	Hazardous Air Pollutants or Hazardous Air Contaminants [<i>HAPs</i> or <i>HACs</i> as defined in AS 46.14.990(14)]
ID	Source Identification Number
kPa	kiloPascals
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology as defined in 40 C.F.R. 63.
MR&R	Monitoring, Recordkeeping, and Reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [<i>NESHAPS</i> as contained in 40 C.F.R. 61 and 63]
NO _x	Nitrogen Oxides
NSPS	Federal New Source Performance Standards [<i>NSPS</i> as contained in 40 C.F.R. 60]
O & M	Operation and Maintenance
O ₂	Oxygen
PM-10	Particulate Matter less than or equal to a nominal ten microns in diameter
ppm	Parts per million
ppmv, ppmvd	Parts per million by volume on a dry basis
psia	Pounds per Square Inch (absolute)
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
SCR	Selective Catalytic Reduction
SIC	Standard Industrial Classification
SO ₂	Sulfur dioxide
TPH	Tons per hour
TPY	Tons per year
VOC	volatile organic compound [<i>VOC</i> as defined in 18 AAC 50.990(103)]
VOL	volatile organic liquid [<i>VOL</i> as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol%	volume percent
wt%	weight percent

Section 1. Identification

Names and Addresses

Permittee: Teck Cominco Alaska, Incorporated
3105 Lakeshore Dr., Bldg. A, Suite 101
Anchorage, AK 99517

Facility Name: Red Dog Mine Facility

Location: 68° 4' North; 162° 50' West

Physical Address: 90 miles North of Kotzebue, AK

Owner & Operator: Teck Cominco Alaska, Incorporated
3105 Lakeshore Dr., Bldg. A, Suite 101
Anchorage, AK 99517

Permittee's Responsible Official: Robert Scott
General Manager

Designated Agent: Hartig, Rhodes, Hoge & Lekisch
717 K Street
Anchorage, AK 99501

Facility and Building Contact: Wayne Hall, Environmental Coordinator
3105 Lakeshore Dr., Bldg A, Suite 101
Anchorage, AK 99517
(907) 426-9259
wayne.hall@teckcominco.com

Fee Contact: Wayne Hall, Environmental Coordinator

Facility Process Description:

SIC Code of the Facility: 1031 - Lead and Zinc Ores

[18 AAC 50.350(b)(1), 1/18/97]

Section 2. General Emission Information

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Lead, Nitrogen Dioxide, Carbon Monoxide, Sulfur Dioxide, Particulate Matter, Volatile Organic Compounds, Acenaphthylene, Acephthylene, Acetaldehyde, Acrolein, Anthracene, Antimony, Arsenic, Benz(a)anthracene, Benzene, Benzo(a)pyrene, Benzo(b, k)fluoranthene, Benzo(g, h, i)perylene, Beryllium, 1,3-Butadiene, Cadmium, Chromium, Chrysene, Cobalt, Dibenz(a, h)anthracene, Dichlorobenzene, Dioxins, Ethylbenzene, Fluoranthene, Fluorene, Formaldehyde, Furans, Hydrogen Chloride, Indeno(1,2,3-cd)pyrene, Manganese, Mercury, Naphthalene, Nickel, Polycyclic Organic Matter, Phenanthrene, Phenol, Phosphorus, Pyrene, Selenium, Toluene, Xylenes, methanol, and Chlorinated Fluorocarbons.

Facility Classifications:

- (1) 18 AAC 50.300(b)(1)(A)
- (2) 18 AAC 50.300(b)(3)
- (3) 18 AAC 50.300(c)(1)
- (4) 18 AAC 50.300(f)

Operating Permit Classifications:

- (1) 18 AAC 50.325(b)(1)
- (2) 18 AAC 50.325(b)(2)
- (3) 18 AAC 50.325(b)(3)
- (4) 18 AAC 50.325(c)

Section 3. Source Inventory and Description

[18 AAC 50.350(d)(2), 1/18/97]

Sources listed in Table 1 have specific monitoring, recordkeeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

Table 1 - Source Inventory

Source ID	Type-Sequence Number	Source Description	Rating/size	Installation Date
Diesel Generators and Pumps				
MG-1	01-11	Wartsila 16V32 Primary Power #1	5000 kW	1988
MG-2	01-12	Wartsila 16V32 Primary Power #2	5000 kW	1994
MG-3	01-13	Wartsila 16V32 Primary Power #3	5000 kW	1988
MG-4	01-14	Wartsila 16V32 Primary Power #4	5000 kW	1988
MG-5	01-15	Wartsila 16V32 Primary Power #5	5000 kW	1988
MG-6	01-31	Wartsila 16V32 Primary Power #6	5000 kW	1994
MG-7	94-05	Cat 3508TA #1 Supplemental power SC	650 kW	1988
MG-8	94-06	Cat 3508TA #2 Supplemental power SC	650 kW	1988
MG-9	94-07	Cat 3508TA #3 Supplemental power PAC	650 kW	1988
MG-10 ¹	94-11	Detroit Diesel ConPAC back up power	275 kW	1998
MG-11	94-28	Cat 3126 Diesel backup fire-water pump ³	195 Hp	Not Installed
MG-12	94-20	Detroit Diesel Reclaim Barge backup power	55 kW	1989
MG-13	94-34	Cat 3208TA Concrete batch plant power	150 kW	1988
MG-14	94-30	Cat 3406 Portable Generator	250 kW	1986
MG-15	94-31	Cat 3406 Portable Generator	250 kW	1986
MG-16	94-35	Cummins GCTA8.3 portable power	188 kW	1997
MG-17	01-54	Wartsila 16V32 Primary Power #7	5000 kW	Not Installed
MG-18	01-49	Wartsila 16V32 Primary Power #8	5000 kW	2001
MG-19	94-12	Cat 3406TA Seepage pond Backup Power	260 kW	1989
MG-20	94-13	Cat 3406B Red Deg Creek Backup Power	250 kW	1989
MG-21	94-18	Cat 3304 Kivalina Backup Power	90 kW	1987
MG-22	94-36	Cummins/Onan New Reclaim Barge Power	100 kW	2003
MG-23 ¹	94-08	Cummins/Onan Portable Generator	30 kW	1989
MG-24 ¹	94-19	Cummins/Onan Portable Generator	125 kW	1989
MG-25 ¹	94-25	John Deere Portable Generator	50 kW	1993
MXG-100 ¹	94-14	Cat 3508 Portable Rock Crusher Generator	850 kW	1989
Heaters				
MH-1	14-06	ABCO Standby glycol/water heater	250 Hp	1988
MH-2	14-05	ABCO Standby glycol/water heater	250 Hp	1988
MH-3	14-17	ABCO Standby glycol/water heater	250 Hp	1988
MH-4	n/a	Facility-Wide Small Heater Group	9.5 MMBtu/Hr	n/a
Incinerators and Soil Remediation Unit				
MI-2	14-01	John-Zink Comptro Incinerator	900 lb/hr	1988
MI-3	14-18	Advanced Combustion Incinerator	625 lb/hr	1996
SRU-1	08-74	United Soil Recycling, ETC unit	2.2 MMBtu/hr	2003
Dust Collectors				
MD-1	29-03	Wheelabrator Baghouse 55W825 Primary Jaw Crusher	7,000 ACFM	1988
MD-2 ²	29-164	Emtrol Wetscrubber 66W40 #1 Coarse Ore Conveyor A	12,500 ACFM	1993

Source ID	Type-Sequence Number	Source Description	Rating/size	Installation Date
MD-3 ²	29-165	Emtrol Wetscrubber 66W40 #2 Coarse Ore Conveyor B	12,500 ACFM	1993
MD-4	29-02	Mikropul baghouse 49S8-20 Assay Lab, Bucking room	3,700 ACFM	1993
MD-5	29-01	Mikropul baghouse 48N4-B Reagent mix lime room	1,200 ACFM	1993
MD-6	29-560	Wheelabrator baghouse 46WCC Gyratory Crusher	9,000 ACFM	1997
Tanks				
MT-1	19-46	Diesel No.1 & 2 Fuel Storage Tank	230,000 gal.	1988
MT-2	19-47	Diesel No.1 & 2 Fuel Storage Tank	230,000 gal.	1988
MT-3	19-70	Diesel No.1 & 2 Fuel Storage Tank	1,200,000 gal.	1997
MT-4	19-171	Diesel No.1 & 2 Fuel Storage Tank	1,140,000 gal.	2001
Fugitive and Miscellaneous				
MF-1		Mill building exhausts and vents	n/a	1988/2001
MF-2 ²	26-01	Ore truck unloading station at primary jaw crusher drop box	n/a	1988
MF-3 ²	26-68	Ore truck unloading station at gyratory crusher drop box	n/a	1997
MF-4 ²	-	Concentrate storage building, truck loading bay exterior doors and vents	n/a	1988
MF-5 ²	-	Mine roads fugitive dust within the ambient air boundary	Area source	1985
MF-6 ²	-	Quarry operations fugitives (dust and methanol) within the ambient air boundary	Area sources	1988
MF-7 ²	-	Stockpiles and exposed areas within the ambient air boundary	Area sources	1988
MF-8 ²	-	Open burning of wood for disposal and/or fire-fighter training	Area source	1986
MF-9 ²	-	Fuel for fire-fighter training purposes	Area source	1989
MC-1	76-06	Concrete Batch Plant feed material fugitive dust	n/a	1996

Table Notes:

1. Sources MG-10, MG-23, MG-24, MG-25 and MXG-100 are nonroad engines.
2. Sources MD-2, MD-3 & MF-2 through MF-9 are not industrial processes.
3. An equivalent replacement pump (CAT 3126, 195 hp) will exchange the existing backup firewater pump (CAT 3208, 196 hp, installed 1988), per Letter Request for Administrative Revision, dated September 3, 2003.

Section 4. Emission Fees

- 1. Assessable Emissions.** The Permittee shall pay to the Department an annual emission fee based on the facility's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

- 1.1 the facility's assessable potential to emit of 5,373 TPY; or
- 1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the Department.

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

- 2. Assessable Emission Estimates.** Emission fees will be assessed as follows:

- 2.1 no later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Suite 303 Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or
- 2.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 1.1.

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

Section 5. Source-Specific Requirements

Fuel-Burning Equipment, Industrial Processes and Incinerators

- 3. Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) MG-1 through MG-9, MG-11 through MG-22, MI-2, MI-3, SRU-1, MF-1, MC-1, MD-1, and MD-4 through MD-6, listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:

- a. more than 20 percent for a total of more than three minutes in any one hour¹;
[18 AAC 50.050(a)(2) & 50.055(a)(1), 1/18/97 and 18 AAC 50.350(d)(1)(D), 6/21/98]
[40 C.F.R. 52.70, 7/01/01]
- b. more than 20 percent averaged over any six consecutive minutes².
[18 AAC 50.050(a), 50.055(a)(1) & 50.346(c), 5/3/02 and 18 AAC 50.350(d)(1)(D), 6/21/98]

- 3.1 Conduct a visible emissions surveillance using the procedure in Condition 7.1, and as follows:

- a. for Source ID(s) MG-22 and SRU-1, within 30 days after initial startup.
- b. Report all results of visible emissions tests conducted under Condition 3.1a in accordance with the facility operating report required in Condition 80.

[Cond. 31.5, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

- 3.2 After the visible emissions testing required in Condition 22.4 for Source ID MG-17 and in Condition 3.1 for Source ID(s) MG-22 and SRU-1, monitor, record and report in accordance with Conditions 3.3 and 3.4, whichever applies.

- 3.3 For Source ID(s) MG-1 through MG-6, MG-17, MG-18, MI-2, MI-3, MF-1³, MC-1, and SRU-1, monitor, record, and report in accordance with Section 6.

- 3.4 For Source ID(s) MG-7 through MG-9, MG-11 through MG-16, MG-19 through MG-22, MD-1, MD-4, MD-5, and MD-6, if any of these sources exceeds the thresholds in Table 2 as determined in Conditions 6.1 and 6.2, monitor, record, and report visible emissions in accordance with Section 6.

[18 AAC 50.350(g) - (i) & 50.346(c), 5/3/02]

¹ For purposes of this permit, the “more than three minutes in any one hour” criterion in this condition and condition 45.1 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA.

² The six-minute average standard is enforceable only by the State until 18 AAC 50.055(a)(1) and 50.050(a), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

³ The Permittee may choose at least two representative vents when monitoring is done by Method 9 observations. The representative vents chosen must be identified and recorded, accordingly.

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- 4. Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from Source ID(s) MG-1 through MG-9, MG-11 through MG-22, SRU-1, MF-1, MC-1, MD-1, MD-4, MD-5, and MD-6 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.346(c), 5/3/02; 18 AAC 50.055(b)(1), 1/18/97 and 18 AAC 50.350(d)(1)(C), 6/21/98]

- 4.1 For Source ID(s) MG-1 through MG-9, MG-11 through MG-22, SRU-1, MD-1, MD-4, MD-5, and MD-6, monitor, record, and report in accordance with Section 6.
- 4.2 For Source ID MC-1, the Permittee shall comply with the requirements of Condition 52.
- 4.3 For Source ID MF-1, the Permittee shall annually certify compliance under Condition 81 with the particulate matter standard.

[18 AAC 50.350(g) - (i) & 50.346(c), 5/3/02]

- 5. Sulfur Compound Emissions.** In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from Sources ID(s) MG-1 through MG-9, MG-11 through MG-22, MF-1⁴, and SRU-1 to exceed 500 ppm averaged over three hours.

[18 AAC 50.346(c), 5/3/02; 18 AAC 50.055(c), 1/18/97; and 18 AAC 50.350(d)(1)(C), 6/21/98]

- 5.1 The Permittee shall do one of the following for each shipment of fuel:
- a. if the fuel grade requires a sulfur content less than 0.45 percent by weight, keep receipts that specify fuel grade, sulfur analysis, and amount;
 - b. if the fuel grade does not require a sulfur content less than 0.45 percent by weight, keep receipts that specify fuel grade and amount and
 - (i) test the fuel for sulfur content; or
 - (ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent; or
 - c. when fuel shipments are combined at the site, calculate the sulfur content of the combined fuel if the sulfur content of any of the fuel combined is greater than 0.16 percent by weight, taking into account the density, volume, and sulfur content of each fuel shipment.

[18 AAC 50.350(f)(4), 1/18/97]

- 5.2 Fuel testing under Condition 5.1 must follow an appropriate method listed in 18 AAC 50.035 or another method approved in writing by the Department.

⁴ The affected source is a single vent associated with a tank for mixing the floatation reagent sodium metabisulfite, located at the Reagent Building.

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- 5.3 If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO₂ emissions in ppm using either Section 18 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).
- 5.4 The Permittee shall report as follows:
- a. If SO₂ emissions calculated under Condition 5.3 exceed 500 ppm, the Permittee shall report under Condition 77. When reporting under this condition, include the calculation under Section 18 or Method 19 of 40 C.F.R. 60, Appendix A-7 adopted by reference in 18 AAC 50.040(a);
 - b. The Permittee shall include in the operating report required by Condition 80
 - (i) a list of the fuel grades received at the facility during the reporting period;
 - (ii) for any grade with a maximum fuel sulfur greater than 0.45 percent sulfur, the fuel sulfur of each shipment; and
 - (iii) for fuel with a sulfur content greater than 0.75 percent, the calculated SO₂ emissions in ppm.

[18 AAC 50.350(g) - (i) & 50.346(c), 5/3/02]
[Cond. 6 and Exhibits B(F) & C, Operating Permit No. 9332-AA003 Am. 2, 12/4/96]
[Conds. 12 & 17, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]
[Conds. 13 & 18, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

Emissions and Fuel Usage Thresholds for Small and Backup Sources

6. To maintain emissions from Source ID(s) MG-7, MG-8, MG-9, MG-11 through MG-16, MG-19 through MG-22, MD-1, MD-4, MD-5 and MD-6 below the insignificant source emissions thresholds listed in 18 AAC 50.335(r), the Permittee shall not allow the sources to exceed the threshold values in Table 2.
- 6.1 Monitor, calculate, and record the monthly fuel consumption and the year-to-date total fuel consumption for each of Source ID(s) MG-7, MG-8, MG-9, MG-11 through MG-16, and MG-19 through MG-22;
- 6.2 Monitor, calculate, and record the monthly hours of operation and PM-10 emissions and the year-to-date total hours of operation and PM-10 emissions for each of Source ID(s) MD-1, MD-4, MD-5 and MD-6. The PM-10 emissions can be computed using the following formula:
- $$(\text{grain/dscf} / 7000) \times (\text{fan, ACFM} \times 560 / (\text{air temp } F + 492)) \times (\text{fan operating time in minutes}) = \text{pounds of PM}_{10}$$
- 6.3 Submit with the facility operating reports required under condition 80:
- a. the records required under Conditions 6.1 and 6.2; and

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- b. an annual compliance certification under condition 81 with the visible emissions and particulate matter standards in conditions 3 and 4, if the sources have not exceeded the thresholds in Table 2.

[18 AAC 50.350(g) – (i), 5/3/02]

Table 2 – Emissions and Fuel Usage Threshold Values

Source ID(s)	Source Description	Rating/Size	Threshold Values (per calendar year, each unit)
MG-7, MG-8, MG-9, MG-11 through MG-16, MG-19 through MG-22	Diesel generators and pumps	90 – 650 kW	6,618 gallons of fuel (for NO _x)
MD-1, MD-4, MD-5, and MD-6	Dust collectors	1,200 – 9,000 ACFM	1,500 lbs. PM ₁₀

[18 AAC 50.230(c)(1)(D), & 50.335(r)(2) & (r)(5), 1/18/97]

Section 6. Visible Emissions and PM Monitoring, Recordkeeping and Reporting

Oil-Fired Sources (MG-1 through MG-9, and MG-11 through MG-22), Dust Sources (MF-1, MC-1, MD-1, MD-4 through MD-6), Incinerators (MI-2 and MI-3), and Soil Remediation Unit (SRU-1) are subject to this section.

- 7. Visible Emissions Monitoring.** The Permittee shall observe the exhaust of Source ID(s) MG-1 through MG-9, MG-11 through MG-22, MI-2, MI-3, SRU-1, MC-1, MF-1, MD-1, and MD-4 through MD-6, for visible emissions using either the Method 9 Plan under Condition 7.1 or the Smoke/No-Smoke Plan (Dust/No Dust for dust sources) under Condition 7.2. The Permittee may change visible-emissions plans for a source at any time unless prohibited from doing so by Condition 7.3.

[18 AAC 50.350(g), 1/18/97 & 50.346(c), 5/3/02]

- 7.1 Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

- a. First Method 9 Observation. Conduct the first Method 9 observation for 18 minutes, as follows:
 - (i) for Source ID(s) MG-7, MG-8, MG-9, MG-11 through MG-17, MG-19 through MG-22, SRU-1, MF-1⁵, MC-1, MD-1, MD-4, MD-5, and MD-6, within six months after the issue date of this permit, within 14 calendar days after changing from the Smoke/No-Smoke Plan (or Dust/No Dust Plan) of Condition 7.2, or within 45 calendar days after triggering this condition, whichever is later.
 - (A) The initial visible emissions tests conducted under Conditions 3.1 and 22.4 for Source ID(s) MG-17, MG-22, and SRU-1 may be counted as the first Method 9 observation.
- b. Quarterly Method 9 Observations. For Source ID(s) MG-1 through MG-6, MG-17, MG-18, MI-2, and MI-3 (only if in operation during the calendar quarter), for the first year of operation under this permit, take opacity readings no less than once per calendar quarter.

[Conds. 30.2 & 31.4, AQC permit 9932-AC005 Rev 2, 7/16/03]
[Cond. 20.4, AQC permit 0032-AC018 Rev 1, 12/26/02]
- c. Monthly Method 9 Observations. For Source ID(s) MG-7, MG-8, MG-9, MG-14, MG-15, MG-16, MG-19 through MG-22, SRU-1, MF-1⁶, MC-1, MD-1, and MD-4 through MD-6, after the first Method 9 observation, perform 18-minute observations at least once in each calendar month that a source operates.

⁵ See footnote 3.

⁶ See footnote 3.

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- d. Semiannual Method 9 Observations. After the first year of quarterly observations under Condition 7.1b or after observing emissions for three consecutive operating months under Condition 7.1c, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, observe emissions at least semiannually for 18 minutes.

Semiannual observations must be taken between four and seven months after the previous set of observations.

- e. Annual Method 9 Observations. After at least two semiannual 18-minute observations, observe emissions at least annually unless
- (A) a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, or
 - (B) the thresholds in Table 2 have not been exceeded.
- (i) For any source that meets the criteria in Condition 7.1e(A), continue observations according to Condition 7.1f.
- (ii) For any source that meets the criterion in Condition 7.1e(B), comply with Condition 6.3.

Annual observations must be taken between 10 and 13 months after the previous observations and must include at least three 18-minute sets of observations.

- f. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that source to at least monthly intervals, until the criteria in Condition 7.1d for semiannual monitoring are met. The start of a new calendar year does not negate this requirement.

7.2 Smoke/No Smoke Plan (or Dust/No Dust). Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

- a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that a source operates.
- b. Reduced Monitoring Frequency. After the source has been observed on 30 consecutive operating days, if the source operated without visible smoke or dust in the exhaust for those 30 days, then observe emissions at least once in every calendar month that a source operates.

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- c. Smoke or Dust Observed. If smoke or dust is observed, either begin the Method 9 Plan of Condition 7.1 or perform the corrective action required under Condition 7.3.

7.3 Corrective Actions Based on Smoke/No Smoke (or Dust/No Dust) Observations.

If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke (or Dust/No Dust) Plan of Condition 7.2, then the Permittee shall either follow the Method 9 plan of Condition 7.1 or

- a. initiate actions to eliminate smoke from the source within 24 hours of the observation;
- b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and
- c. after completing the actions required under Condition 7.3a,
 - (i) take observations in accordance with Condition 7.2
 - (A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and
 - (B) continue as described in Condition 7.2b; or
 - (ii) if the actions taken under Condition 7.3a do not eliminate the smoke or if subsequent smoke or dust is observed under the schedule of Condition 7.3c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke (or Dust/No Dust) Plan. After observing smoke or dust and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke (or Dust/No Dust) Plan under Condition 7.2a.

8. Visible Emissions Recordkeeping. The Permittee shall keep records as follows:

[18 AAC 50.350(h) & 50.346(c), 5/3/02]

8.1 If using the Method 9 Plan of Condition 7.1

- a. the observer shall record
 - (i) the name of the facility, emissions source and location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Section 17;

-
- (ii) the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky Condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;
 - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
 - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation in Section 17, and
 - (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period;
- b. to determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet; and
 - c. calculate and record the highest 18-consecutive-minute averages observed.
- 8.2 If using the Smoke/No Smoke (or Dust/No Dust) Plan of Condition 7.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:
- a. the date and time of the observation;
 - b. from Table 1, the ID of the source observed;
 - c. whether visible emissions are present or absent in the exhaust;
 - d. a description of the background to the exhaust during the observation;
 - e. if the source starts operation on the day of the observation, the startup time of the source;
 - f. name and title of the person making the observation; and
 - g. operating rate (load or fuel consumption rate).
-

9. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

[18 AAC 50.350(i), 1/18/97 & 50.346(c), 5/3/02]

9.1 Include in each facility operating report under Condition 80

- a. which visible-emissions plan of Condition 7 was used for each source; if more than one plan was used, give the time periods covered by each plan;
- b. for each source under the Method 9 Plan,
 - (i) copies of the observation results (i.e. opacity observations) for each source that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;
 - (B) highest six-minute average observed; and
 - (C) dates when one or more observed six-minute averages were greater than 20 percent;
- c. for each source under the Smoke/No Smoke (or Dust/No Dust) Plan, the number of days that observations were made and which days, if any, that smoke or dust was observed; and
- d. a summary of any monitoring or recordkeeping required under Conditions 7 and 8 that was not done.

9.2 Report under Condition 77:

- a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and
- b. if any monitoring under Condition 7 was not performed when required, report within three days of the date the monitoring was required.

10. Particulate Matter Monitoring for Diesel Engines. The Permittee shall conduct source tests on diesel engines Sources ID(s) MG-1 through MG-9, and MG-11 through MG-22, to determine the concentration of particulate matter (PM) in the exhaust of a source, as follows:

[18 AAC 50.350(g), 1/18/97 & 50.346(c), 5/3/02]

10.1 Within six months of exceeding the criteria of Condition 10.2a or 10.2b, either

- a. conduct a PM source test according to requirements set out in Section 13; or

-
- b. make repairs so that emissions no longer exceed the criteria of Condition 10.2; to show that emissions are below those criteria, observe emissions as described in Condition 7.1 under load conditions comparable to those when the criteria were exceeded.

10.2 Conduct the test according to Condition 10.1 if

- a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or
- b. for a source with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

10.3 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.

10.4 The automatic PM source test requirement in Conditions 10.1 and 10.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

11. Particulate Matter Recordkeeping for Diesel Engines. Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter(s) of Source ID(s) MG-1 through MG-9 and MG-11 through 22. Report the stack diameter(s) in the next operating report under Condition 80.

[18 AAC 50.350(h) & 50.346(c), 5/3/02]

12. Particulate Matter Reporting for Diesel Engines. The Permittee shall report as follows:

[18 AAC 50.350(i), 1/18/97 & 50.346(c), 5/3/02]

12.1 Report under Condition 77

- a. the results of any PM source test that exceeds the PM emissions limit; or
- b. if one of the criteria of Condition 10.2 was exceeded and the Permittee did not comply with either Condition 10.1a or 10.1b, this must be reported by the day following the day compliance with Condition 10.1 was required.

12.2 Report observations in excess of the threshold of Condition 10.2b within 30 days of the end of the month in which the observations occur.

12.3 In each facility operating report under Condition 80, include

- a. the dates, Source ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 10.2;

-
- b. a summary of the results of any PM testing under Condition 10; and
 - c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 10.2, if they were not already submitted.

For Baghouses (MD-1, MD-4 through MD-6) and Soil Remediation Unit (SRU-1)

13. Particulate Matter Monitoring. The Permittee shall conduct source tests to determine the concentration of PM in the exhaust of Source ID(s) MD-1, MD-4 through MD-6, and SRU-1, as follows:

- 13.1 Conduct a PM source test according to the requirements set out in Section 13 no later than 90 calendar days after any time corrective maintenance fails to eliminate visible emissions greater than the 20 percent opacity threshold for two or more 18-minute observations in a consecutive six-month period.
- 13.2 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run.
- 13.3 The PM source test requirement in Condition 13.1 is waived for an emission unit if:
 - a. a PM source test during the most recent semiannual reporting period on that unit shows compliance with the PM standard since permit issuance, or
 - b. if a follow-up visible emission observation conducted using Method-9 during the 90 days shows that the excess visible emissions described in Condition 7.1f no longer occur.

[18 AAC 50.350(g), 1/18/97]

14. Particulate Matter Recordkeeping. The Permittee shall keep records of the results of any PM testing and visible emissions observations conducted under Conditions 13.1 and 13.2, in accordance with Condition 76.

[18 AAC 50.350(h), 5/3/02]

15. Particulate Matter Reporting. The Permittee shall report as follows:

- 15.1 In each facility operating report required by Condition 80, include
 - a. the dates, Source ID(s), and results when an 18-minute opacity observation was greater than the applicable threshold criterion in 7.1f; and
 - b. a summary of the results of any PM testing and visible emissions observations conducted under Conditions 13.1 and 13.2.

15.2 Report as excess emissions, in accordance with Condition 77, any time the results of a source test for PM exceeds the PM emission limit stated in Condition 4.

[18 AAC 50.350(i), 1/18/97]

Section 7. Ambient Air Quality Standards, Maximum Allowable Ambient Concentrations and Best Available Control Technology (BACT)

- 16. Public Access Control Plan.** The Permittee shall comply with the provisions of the Public Access Control Plan contained in Section 8 of this permit. The public access control plan contained in Section 8 supersedes all public access control plans that were approved by the Department prior to the effective date of this permit. The Permittee may submit revisions to the Public Access Control Plan for Department approval no later than 120 days after the effective date of Permit No. 9932-AC005 Revision 2 for Department adjustments to the ambient air quality boundary imposed by this permit decision.

[Cond. 10, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

- 17. Sulfur Dioxide Requirements.** For all fuel oil-burning sources listed in Table 1 of this permit, the Permittee shall comply with the following requirements:

17.1 The sulfur content of fuel oil burned must not exceed

- a. 0.45 percent by weight at any time; and
- b. 0.16 percent averaged over the most recent 12 consecutive months.

17.2 Monitor and record according to Conditions 5.1 and 5.2.

17.3 Keep records of calculations performed in Condition 5.1 to determine the sulfur content of combined shipments, and copies of fuel delivery receipts used in the calculations.

17.4 For each calendar month, calculate and record the sulfur content averaged over the most recent 12 consecutive months.

17.5 Report under Condition 77 if

- (i) fuel delivered exceeds 0.45 percent by weight sulfur; or
- (ii) the consecutive 12-month average fuel sulfur concentration obtained in Condition 17.4 exceeds 0.16 percent by weight.

17.6 Include with the operating reports in Condition 80 the records required under Conditions 17.3 and 17.4.

[Cond. 6 and Exhibits B(F), C, & D, Operating Permit No. 9332-AA003 Am. 2, 12/4/96]

[Conds 12 & 17, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]

[Conds. 13 & 18, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

[18 AAC 50.350(g) – (i), 5/3/02]

18. Nitrogen Dioxide Requirements. The Permittee shall comply with the following requirements for Sources MG-1 through MG-6, MG-17⁷ and MG-18:

- 18.1 Oxides of nitrogen emissions, expressed as NO₂, shall not exceed 3,878 tons in any 12 consecutive month period.
- 18.2 For each calendar month, record the hours of operation of each source.
- 18.3 For each calendar month, calculate and record the emissions from each source and the emissions from all sources during the most recent 12 consecutive month period. Use the following equation and emission factors to calculate the monthly NO_x emission rate, M, for each source. The Department, in its discretion, will adjust the emission factors based upon the results of source tests conducted according to the procedures specified in Section 13 of this permit. Upon receiving a written request or approval from the Department, the Permittee shall use the adjusted emission factors.

$$M = \text{Emission Factor} \times (\text{hours of operation each month}) \times (1 \text{ ton}/2000 \text{ lb})$$

Emission Factors:

Source MG-1 = 121.3 lbs/hour	Source MG-2 = 121.3 lbs/hour
Source MG-3 = 121.3 lbs/hour	Source MG-4 = 121.3 lbs/hour
Source MG-5 = 121.3 lbs/hour	Source MG-6 = 121.3 lbs/hour
Source MG-17 = 121.3 lbs/hour	Source MG-18 = 121.3 lbs/hour

- 18.4 Report the records required by Conditions 18.2 and 18.3 by submitting a copy of the records with the Facility Operating Report required by Condition 80

[Cond. 13, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]

[Cond. 14, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

[18 AAC 50.350(g) – (i), 5/3/02]

19. Fugitive Particulate Matter Requirements. For Source ID MF-5, the Permittee shall comply with the following requirements:

- 19.1 Control particulate matter emissions from the DeLong Mountain Regional Transportation System road and all facility unpaved roads, including the in-pit bench access unpaved roads, the oxide dump haul road, and the main haul roads to the crusher stockpile, the special ore stock pile, and the overburden dumps, as follows:
- a. At least once each calendar year, as soon as road and weather conditions allow, but in no case later than July 10, apply calcium chloride, or similar dust control agents in sufficient quantities to control fugitive dust. Measure the effectiveness of dust control application as outlined in Condition 19.1b.

⁷ Authorization for MG-17 is currently in dispute with the EPA pending resolution of the Supreme Court of the United States Case. Permit No. 0032-AC018 authorizing the installation of MG-18 is independent of MG-17's authorization and the outcome of the pending court case.

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- b. Each day the road surface is not frozen or the road surface does not exhibit visible surface moisture, determine and record the duration of particulate matter emissions resulting from road traffic, as follows:
 - (i) in accordance with the procedures specified in 40 CFR 60, Appendix A, Reference Method 22;
 - (ii) record the vehicle type for each reading;
 - (iii) initiate observations at the time that the observed vehicle passes the observer; and
 - (iv) continue observations until that vehicle's visible emissions have completely dissipated.
 - c. If the duration of particulate matter emissions is greater than two minutes, then apply additional calcium chloride or water to the road surface to reduce particulate matter emissions as soon as practicable. After the application of additional calcium chloride or water, determine and record the duration of vehicle particulate matter emissions, as described in Condition 19.1b.
- 19.2 Control particulate matter emissions from the DeLong Mountain Regional Transportation System paved road sections and all paved road sections at the facility as follows:
- a. Control particulate matter emissions of the paved road sections by means of dust removal, sweeping, vac-clean, or surface washing.
 - b. Determine and record the duration of vehicle particulate matter emissions as described in Condition 19.1b.
 - c. If the duration of particulate matter emissions is greater than two minutes, then perform particulate matter removal by means of sweeping, vac-clean, or surface washing of the road surface to reduce particulate matter emissions as soon as practicable. After each performed particulate matter removal when the road surface has dried, determine and record the duration of vehicle particulate matter emissions, as described in Condition 19.1b.
- 19.3 For the use of alternative road dust control agents and or strategies other than set out in Condition 19.1a or 19.2a; the Permittee shall obtain a written approval from the Department.
- a. Submit the request for approval to the Department no less than 30 days prior to the use of alternative road dust control agents and strategies.

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- b. Include descriptions of the road dust agents and methods of application, frequency of the application, material safety data sheet for each agent, dosages of the agent per surface area, and location and time period when the alternative road dust control operations will start.
 - c. Measure the effectiveness of alternative dust controls as set out in Condition 19.1b.
- 19.4 Record the date, time, location, and description of all actions taken to control particulate matter emissions under Conditions 19.1, 19.2, and 19.3.
- 19.5 Submit a copy of the records required under Conditions 19.1b and 19.4 with the facility operating report required by Condition 80.

[Cond. 15, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

20. Nonroad Engine Requirements. The Permittee shall comply with the following requirements:

- 20.1 Limit the hours of operation for Source ID MXG-100, portable rock crusher generator, to no greater than 3,000 hours per consecutive 12-month period at the Mine Site.

[Cond. 14, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]

- a. Monitor and record the monthly and consecutive 12-month period total hours of operation of Source ID MXG-100 at the Mine Site.
- b. Include copies of the records required in Condition 20.1a with the operating reports required under Condition 80.
- c. Report under Condition 77 if Source ID MXG-100 exceeds the operational hour limit in Condition 20.1.

[18 AAC 50.350(g) – (i), 5/3/02]

21. Stack Parameter Requirements. The Permittee shall:

- 21.1 after the federal district court decision on Docket No. 00-70166 is made and Teck Cominco Alaska, Inc. decides to proceed with installing MG-17⁸, construct the stack for Source ID MG-17 with an exhaust outlet no less than 75 feet above grade; and
- 21.2 submit to the Department within 14 days after completion, As-Built engineering drawings and photographs of the exhaust stack for Source MG-17 to ensure compliance with Condition 21.1.

[Cond. 15, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]

⁸ Authorization for MG-17 is currently in dispute with the EPA pending resolution of the Supreme Court of the United States Case. Permit No. 0032-AC018 authorizing the installation of MG-18 is independent of MG-17's authorization and the outcome of the pending court case.

BACT Emissions Limits:

- 22.** For Source ID(s) MG-1, MG-3, MG-4, MG-5, MG-11 through 17, MG-19, MG-20, MG-21, MH-1 through MH-4, MI-3, MD-1 through MD-4, MD-6, MF-2 through MF-9, and MC-1, comply with the BACT limits indicated in Table 3.

NOx Emissions Requirements:

- 22.1 For the Wartsila Generator, Source ID MG-17:

- a. make no irrevocable commitment for equipment or engineering design that would preclude SCR as an emission control technology.

- 22.2 NOx Source Tests: The Permittee shall conduct source tests to determine compliance of each source with the NOx BACT limits indicated in Table 3, as follows:

- a. for the Wartsila Generator, Source ID MG-17, within 180 days after startup;
- b. for the Diesel Generators, Source ID(s) MG-11 through MG-16, and MG-19 through MG-21, at the Department's request.

- 22.3 Report the results of the source tests conducted under Condition 22.2 in accordance with the requirements set forth in Section 13 of this permit.

[Cond, 22, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) – (i), 5/3/02]

Particulate Matter Requirements:

- 22.4 Visible Emissions Source tests: The Permittee shall conduct visible emissions source tests using the procedure described in Condition 7.1 to determine compliance of Source ID MG-17 with the visible emissions limits indicated in Table 3, within 180 days after the source startup.

- 22.5 PM Source tests: The Permittee shall conduct PM source test to determine compliance of Source ID MG-17 with the PM limits indicated in Table 3, within 180 days after startup.

- 22.6 Report the results of the source tests conducted under Conditions 22.4 and 22.5 in accordance with the requirements set forth in Section 13 of this permit.

[Cond, 23.1, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) – (i), 5/3/02]

Point Sources and Fugitive Particulate Matter Emissions Requirements:

- 22.7 For Source ID(s) MD-1 through MD-4, MD-6, MC-1 and MF-2 through MF-9, comply with the requirements indicated in Table 3.

[Conds. 23.4 – 23.9, Construction Permit 9932-AC005, Rev. 2, 7/16/03]
[18 AAC 50.350(g) – (i), 5/3/02]

Table 3 – BACT Limits

Source ID(s)	NO _x Limits	Visible Emissions Limits	PM Limits	Fugitive Emissions Requirements
MG-1, MG-3, MG-4, and MG-5	750 ppm (corrected to 15 % O ₂ , averaged over any three hours)	None	None	None
MG-17	121.3 lb/hr (expressed as NO ₂ , averaged over any	SIP standards (Condition 3)	2.6 lb/hr (averaged over three hours)	
MG-11 through MG-16, MG-19 through MG-21	0.031 lb/hp-hr	SIP standards (Condition 3)	None	
MH-1 through MH-3	0.084lb/MMBtu heat input	SIP standards (Condition 3)	None	
MH-4	None	SIP standards (Condition 3)	None	
MI-3	None	10 %, averaged over 6 minutes	0.086 grains/dscf (corrected to 7% O ₂ in the exhaust, averaged over three hours)	
MD-1 through MD-3, MF-2, MF-3, and MF-4	None	Comply with Condition 43. (NSPS, Subpart LL)	Comply with Condition 43. (NSPS, Subpart LL)	
MD-4	None	Comply with Condition 43. (NSPS, Subpart LL)	0.01 grains/dscf (averaged over three hours)	
MD-6	None	SIP standards (Condition 3) Comply with Condition 43. (NSPS, Subpart LL)	0.01 grains/dscf (averaged over three hours) Comply with Condition 43 (NSPS, Subpart LL)	
MC-1, MF-6 & MF-7	None			Comply with Condition 52.
MF-5	None			Comply with Condition 19.
MF-8 & MF-9	None			Comply with Conditions 54 and 54.9

23. BACT Reanalysis. For sources regulated under Condition 22 of this permit, the Permittee shall notify the Department if the Permittee

23.1 has not commenced substantial and continuous construction activity within 18 months after the permit was issued; or

23.2 ceases substantial or continuous construction activity for 18 or more months before the approved construction or modification is complete.

[Cond. 52, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

Section 8. Public Access Control Plan

24. Mine Boundary. The Permittee shall prohibit the general public from entering the area within the boundary shown as the Mine Site Ambient Air Extension 1999 on the map attached to this permit as follows:

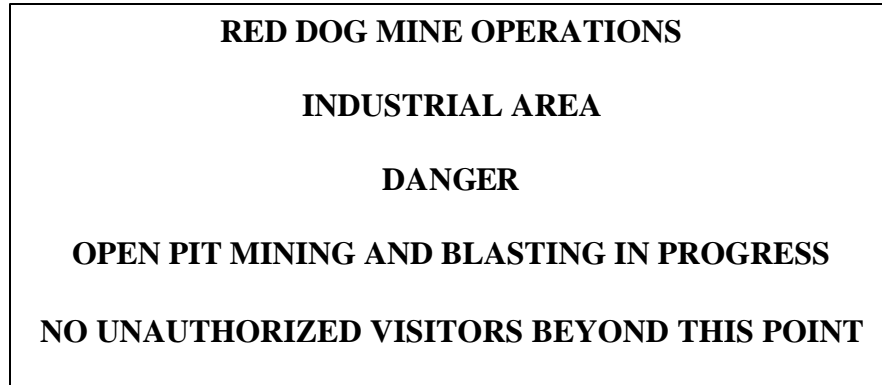
24.1 The Permittee shall maintain written agreements with NANA and ADNR that provide the Permittee with the legal right to restrict the general public from accessing the lands within the boundary shown as the Mine Site Ambient Air Extension 1999 that are leased to the Permittee by NANA and ADNR. The lands leased to the Permittee by NANA and ADNR are shown on the map attached to this permit. In the event the Permittee no longer possesses the legal ability to prevent the general public from accessing the lands leased by NANA or ADNR to the Permittee, the Permittee shall promptly notify the Department.

24.2 The Permittee shall install signs along the boundary shown as the Mine Site Ambient Air Extension 1999 on the map attached to Construction Permit No. 9932-AC005 Rev.2 in the following locations:

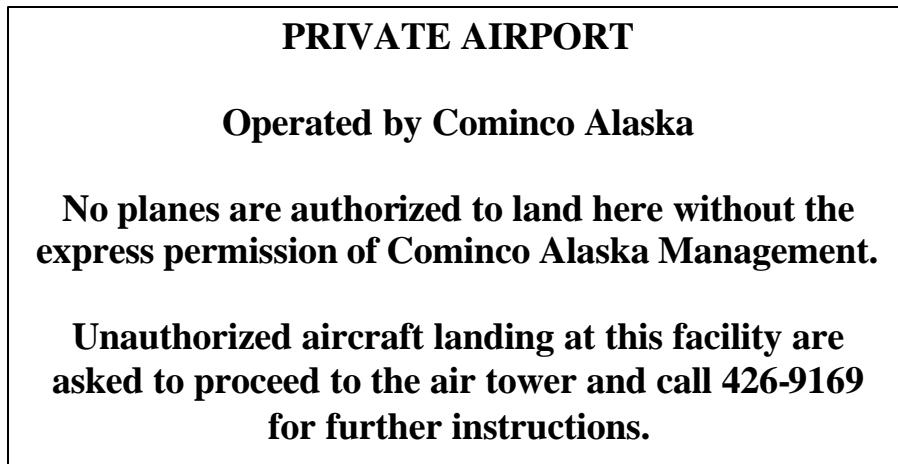
- a. Site #18 on the attached map, which is directly adjacent to the DeLong Mountains Transportation System (DMTS) road at the boundary shown as the Mine Site Ambient Air Extension 1999.
- b. Site #19 shown on the attached map, which is within the drainage of Red Dog Creek, approximately ½ mile upstream from the confluence with Ikalukrok Creek.
- c. Sites #20, 21, and 22 shown on the attached map, along the east and southeast side of the boundary shown as the Mine Site Ambient Air Extension 1999.
- d. Site #23 shown on the attached map, which is outside the building known as the Personnel Accommodations Complex.

24.3 The Permittee shall construct, install, and maintain each sign as follows:

- a. The sign must measure 6 feet wide by 4 feet high and be mounted on posts where the view plain of the sign is free of obstructions.
- b. The sign at Site #18 must read as described in Condition 26.4 of this section.
- c. The signs at Sites #19, 20, 21, 22, and 23 must read in clearly legible, large font:

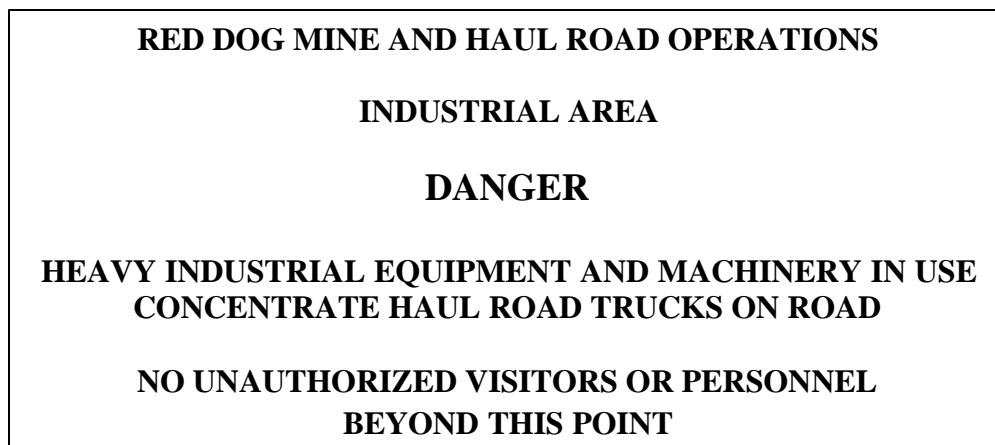


- 24.4 The Permittee shall inspect each sign semi-annually and promptly repair or replace the sign as necessary to maintain its lettering and mounting. The Permittee shall take necessary actions to keep the view plain of the sign clear.
25. **Airport.** The Permittee shall prohibit the general public from using the airport that is located within boundary shown as the Mine Site Ambient Air Extension 1999. In addition, the Permittee shall
- 25.1 post a metal sign on the control tower at the airport which reads in clearly legible, large font:



- 25.2 inspect the sign semi-annually and promptly repair or replace the sign as necessary to maintain its lettering and mounting; and
- 25.3 take necessary actions to keep the view plain of the sign clear.
26. **DeLong Mountain Regional Transportation System Road (DMTS).** The DMTS and material sites adjacent to the DMTS are shown on the map attached to Construction Permit No. 9932-AC005 Rev. 2. The Permittee shall limit access to the DMTS and to material sites adjacent to the DMTS as follows:

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- 26.1 Limit vehicular use to authorized users. Authorized user means one of the following while conducting official business in relation to the facility: a federal and state employee, an employee of the Permittee, an employee of a contractor retained by Permittee to maintain, expand, or reclaim the road, or an employee or representative of NANA.
- 26.2 Authorized users shall yield to any unauthorized traffic along the DMTS Road and immediately contact the Permittee's Road Supervisor, or his designee, by radio to inform him of any unauthorized traffic. The Road Supervisor, or his designee, shall attempt to stop the unauthorized traffic, counsel the driver about the hazards of driving on the DMTS, and ask the driver to observe the restrictions on the road's use. When counseling an unauthorized driver, the Road Supervisor, or his designee, will inform the driver that unhealthy levels of fugitive dust may be present in the vicinity of vehicular traffic, and areas where dust is present must be avoided.
- 26.3 The Permittee shall install signs at the following locations:
- a. Site #18 shown on the attached map, which is at the north end of the DMTS;
 - b. Site #5 shown on the attached map, which is at the south end of the DMTS.
- 26.4 The Permittee shall construct, install, and maintain each sign as follows:
- a. The sign must measure 6 feet wide by 4 feet high and be mounted on posts where the view plain of the sign is free of obstructions.
 - b. The sign must read in clearly legible, large font:



- 26.5 The Permittee shall inspect each sign semi-annually and promptly repair or replace the sign as necessary to maintain its lettering and mounting. The Permittee shall take necessary actions to keep the view plain of the sign clear.

27. Trail Crossings. Two distinct winter trails cross the DMTS at three separate locations, shown on the map attached to this permit. The Permittee shall take the following measures to protect the general public at the locations where the trail crosses the DMTS:

- 27.1 When a member of the general public is seen within 100 yards of the DMTS, the Permittee shall require authorized users of the DMTS to stop their vehicles at least 100 yards prior to a trail crossing and not resume travel until the member of the general public has moved at least 100 yards beyond the centerline of the DMTS.
- 27.2 At each trail crossing, the Permittee shall install signs on the DMTS warning drivers to stop in the event trail traffic approaches to within 100 yards of the DMTS. At a minimum, the Permittee shall install signs at Sites #6, 8, 10, 12, 14, and 16 shown on the map attached to this permit. The signs must be situated so a driver can observe the sign traveling in either direction on the DMTS, and take actions to stop 100 yards from a trail crossing.
- 27.3 The Permittee shall construct, install, and maintain each sign at the trail crossings on the DMTS as follows:
- a. The sign must measure 6 feet wide by 4 feet high and be mounted on posts where the view plain of the sign is free of obstructions.
 - b. The sign must read in clearly legible, large font:

**WINTER TRAIL INTERSECTION WITH
DELONG MOUNTAINS TRANSPORTATION SYSTEM
(DMTS)**

CAUTION

**STOP AND YIELD TO TRAIL TRAFFIC IF
APPROACHING WITHIN 300 FEET OF THE ROAD**

- 27.4 The Permittee shall inspect each sign semi-annually and promptly repair or replace the sign as necessary to maintain its lettering and mounting. The Permittee shall take necessary actions to keep the view plain of the sign clear.
- 27.5 At each trail crossing, the Permittee shall post signs along the trail instructing travelers not to cross the DMTS if traffic is present. In the event a traveler violates this instruction, the Permittee's Port Road Supervisor, or his designee, shall attempt to contact the traveler, counsel the traveler about the hazards of crossing the DMTS, and ask the traveler to observe the restrictions on the road's use. When counseling a traveler, the Road Supervisor, or his designee, will inform the traveler that unhealthy levels of fugitive dust may be present in the vicinity of vehicular traffic, and areas where dust is present must be avoided.

27.6 At each trail crossing, the Permittee shall install signs along the trail on each side of the DMTS warning travelers to stop in the event DMTS traffic approaches to within 100 yards of the trail crossing. At a minimum, the Permittee shall install signs at Sites #7, 9, 11, 13, 15, and 17 shown on the map attached to permit 9932-AC005. The signs must be situated so a traveler can observe the sign and take actions to stop at least 100 yards from where the trail crosses the DMTS.

27.7 The Permittee shall construct, install, and maintain each sign as follows:

- a. The sign must measure 6 feet wide by 4 feet high and be mounted on posts where the view plain of the sign is free of obstructions.
- b. The sign must read in clearly legible, large font:

**WINTER TRAIL INTERSECTION WITH
DELONG MOUNTAINS TRANSPORTATION SYSTEM (DMTS)**

INDUSTRIAL AREA

**DANGER
HEAVY INDUSTRIAL EQUIPMENT AND MACHINERY IN USE
DO NOT CROSS IF TRAFFIC IS PRESENT**

**USE OF THE DMTS ROAD AND PORT, EXCEPT FOR CROSSING,
IS RESTRICTED TO AUTHORIZED PERSONNEL ONLY**

- c. The Permittee shall inspect each sign semi-annually and promptly repair or replace the sign as necessary to maintain its lettering and mounting. The Permittee shall take necessary actions to keep the view plain of the sign clear.

[Section 14, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

Section 9. Owner-Requested Limits

- 28. Limits to Avoid PSD for Carbon Monoxide.** To avoid PSD review for carbon monoxide, the Permittee shall comply with the requirements in this condition to limit the facility's potential to emit.

28.1 MG-18 operational restriction:

- a. Except as provided for in Condition 28.1b and 28.1c operate MG-18 only when one of MG-1 through MG-6 is not in operation.
- b. MG-18 may operate concurrently with all of MG-1 through MG-6 only for transition periods not to exceed one hour in duration, and only when MG-18 or one of the other generators is being brought on line or taken off-line due to planned maintenance or malfunction as long as the operational restriction in Condition 28.3g is met.
- c. MG-18 may also operate concurrently with all of MG-1 through MG-6 up to a maximum of six hours for testing purposes when one of the other generators MG-1 through MG-6 has undergone major overhaul or repairs as long as the operational restriction in Condition 28.3g is met.
- d. Maintain operational records (time, duration, and unit number) for MG-1 through MG-6 and MG-18. Record the time, date, duration and reason for each incident that requires concurrent operation authorized in Conditions 28.1b and 28.1c.
- e. Report the permit deviation to the Department as provided in Condition 77, if MG-18 operates when all of MG-1 through MG-6 are in operation, except as authorized in Conditions 28.1b and 28.1c.
- f. Attach to the facility operating report required by Condition 80 the recorded information in Condition 28.1d and the total duration of concurrent operation during the reporting period.

[Conds. 16.1 & 16.3, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]
[18 AAC 50.350(g) - (i), 5/3/02]

- 28.2 Limit carbon monoxide emissions from Sources MG-1 through MG-6, MG-17, and MG-18 to no greater than 8.0 lb/hr, averaged over any three hours.**

- a. Conduct source tests on Source MG-17 within 60 days after start-up and conducted upstream of (before) the Selective Catalytic Reduction (SCR) control system to determine compliance with the carbon monoxide emission limits in Condition 28.2.
- b. Report the results of source tests conducted under Condition 28.2a, as set out in Section 13 of this permit.

[Cond. 16.2, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02
[Conds. 17.1 & 17.3, Construction Permit No. 9932-AC005, Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

- 28.3 Limit the operation of the following sources in any consecutive 12-month period to no greater than:
- a. 22,500 hours for the combined operation of the ABCO Glycol/water Heaters, Source ID(s) MH-1, MH-2, and MH-3;
 - b. 3,000 hours for the ConPac Camp Backup Power Generator, Source ID MG-10;
 - c. 5,000 hours for the Advanced Combustion Incinerator, Source ID MI-3;
 - d. 2,400 hours each, for the Concrete Batch Plant, Source ID MC-1, and the Concrete Batch Plant Generator, Source ID MG-13;
 - e. 1,690,000 kilowatt-hours of combined power output from the Supplemental Power Service Complex Generators, Source ID(s) MG-7, MG-8, and MG-9;
 - f. 500 hours each, for Source ID(s) MG-12, MG-19, MG-20, MG-21 and MG-22; and
 - g. 52,560 hours total combined for Source ID(s) MG-1 through MG-6 and MG-18.

[Cond. 18.2, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[Cond. 16.5, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]

- 28.4 For each calendar month, monitor, calculate, and record
- a. the hours that each Source ID(s) MH-1, MH-2, MH-3, MG-1 through MG-6, MG-10, MG-12, MG-13, MG-18 through MG-22, MI-3, and MC-1 operated in the most recent consecutive 12-month period; and
 - b. the combined kilowatt-hours produced by Source ID(s) MG-7, MG-8, and MG-9 during the most recent 12 consecutive months.
- 28.5 Submit a copy of the records required by Condition 28.4 with the facility operating report required by Condition 80
- 28.6 Report under Condition 77 if any of the sources exceeded the operational limits set out in Condition 28.3.

[Conds. 17.4 & 17.5, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

- 29. Limits to Avoid PSD for Sulfur Dioxide.** To avoid PSD review for sulfur dioxide, the Permittee shall comply with the requirements in this condition to limit the facility's potential to emit:

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- 29.1 For all fuel oil-burning sources listed in Table 1 of this permit, comply with the requirements of Condition 17.

[Cond. 17.3, Construction Permit No. 0032-AC018 Rev.1, 11/26/02]
[Conds. 16.3, 16.4, 18.1, 18.3, & 18.4, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

- 29.2 Operate following the limits set out in Conditions 28.1 and 28.3.

[Conds. 17.1, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]
[Cond.18.2, Construction Permit No. 9932-AC005 Rev 2, 7/16/03]

- 29.3 Provide information as set out in Condition 28.1f and 28.5.

[Cond. 17.2, Construction Permit No. 0032-AC018 Rev. 1, 11/26/02]
[18 AAC 50.350(h), 5/3/02]

- 29.4 Limit the operation of the following nonroad engines, in any consecutive 12-month period to no greater than:

- a. 1,000 hours for Source ID MG-23 (94-08);
- b. 7,000 hours for Source ID MG-24 (94-19); and
- c. 6,000 hours for Source ID MG-25 (94-25).

- 29.5 For each calendar month, monitor, calculate and record the hours that each Source ID(s) MG-23, MG-24, and MG-25 operated in the most recent consecutive 12-month period.

- 29.6 Submit a copy of the records required by Condition 29.5 with the facility operating report required by Condition 80.

- 29.7 Report under Condition 77 if any of the sources exceeded the operational-hour limits set out in Condition 29.4.

[Conds. 16.1 & 16.2, Construction Permit No. 9932-AC005, Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

- 30. Limits to Avoid PSD for Oxides of Nitrogen.** To avoid PSD review for oxides of nitrogen (NO_x), the Permittee shall comply with the requirements of this section to limit the facility's potential to emit.

For Source ID MG-18:

- 30.1 For MG-18, limit NO_x emissions to no greater than 121.3 lbs/hour.

- a. Operate, monitor, record and report as set out in Conditions 28.1 and 28.3g.
- b. Report under Condition 77 if the source exceeds the limit in Condition 30.1.

[Cond. 18, Construction Permit No. 0032-AC018 Rev.1, 11/26/02]
[18 AAC 50.350(g) - (i), 5/3/02]

For Source ID(s) MG-1, MG-3, MG-4, and MG-5:

30.2 Limit the emissions of oxides of nitrogen from the Wartsila Generators, Source ID(s) MG-1, MG-3, MG-4, and MG-5 to no greater than 2,259 tons in any consecutive 12-month period.

- a. For each calendar month, record the hours of operation of each source.
- b. For each calendar month, calculate and record the emissions from each source and the emissions from all sources during the most recent 12 consecutive month period. Use the following equation and emission factors to calculate the monthly NO_x emission rate, M, for each source. The Department, in its discretion, will adjust the emission factors based upon the results of source tests conducted according the procedures specified in Section 13 of this permit. Upon receiving a written request or approval from the Department, the Permittee shall use the adjusted emission factors.

M = Emission Factor x (hours of operation each month) x (1 ton/2000 lb)

Emission Factors:

Source MG-1 = 121.3 lbs/hour

Source MG-3 = 121.3 lbs/hour

Source MG-4 = 121.3 lbs/hour

Source MG-5 = 121.3 lb/hour

- c. Submit a copy of the records required in Conditions 30.2a and 30.2b with the facility operating report required by Condition 80.
- d. Report under Condition 77 if the sources exceed the limit in Condition 30.2.

[Cond.19.1, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

31. Limits to Avoid PSD for Oxides of Nitrogen for Source ID(s) MG-3 and MG-17 with Selective Catalytic Reduction (SCR) Controls. Condition 31 is applicable only for the period that the U. S. EPA Amended Administrative Order Docket No. CAA-10-2000-0035 dated March 7, 2000 is valid.

31.1 Limit the emissions of oxides of nitrogen for the first 12 months after start up of Source ID MG-17, as follows:

- a. For Source ID MG-17 with SCR control, to no greater than 18.2 lbs/hour. Reduce emissions through SCR controls;
- b. For Source ID MG-17 with SCR control, to no greater than 6.64 tons per month;
- c. For Source ID MG-3, to no greater than 38.0 tons per month. At all times when Source ID MG-18 operates while Source ID MG-3 is out of service, include MG-18 emissions to count for the purpose of this listed limit;

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- d. For Source ID(s) MG-1 through MG-6, MG-17 with SCR control, and MG-18, to no greater than 266.1 tons per month; and
 - e. For Source ID(s) MG-1, MG-3, MG-4, and MG-5 to no greater than 170.9 tons per month.
- 31.2 Twelve months after start up of Source ID MG-17, limit the emissions of oxides of nitrogen per consecutive 12-month period, as follows:
- a. For Source ID MG-17 with SCR control, to no greater than 79.7 tons;
 - b. For Source ID MG-3, to no greater than 457.0 tons. At all times when Source ID MG-18 operates as a backup to Source ID MG-3, include MG-18 emissions to count for the purpose of this listed limit;
 - c. For Source ID(s) MG-1 through MG-6, MG-17 with SCR control, and MG-18 shall to no greater than 3,193.2 tons; and
 - d. For Source ID(s) MG-1, MG-3, MG-4, and MG-5 to no greater than 2,050.0 tons.
- 31.3 For Source ID MG-17 with SCR control, limit the emissions of ammonia (NH₃) to no greater than 30 ppm by volume.
- 31.4 Before Source ID MG-17 start up, install and calibrate a SCR unit for continuous NOx controls of no less than 85% control efficiency.
- a. Monitor performance of SCR system as set out in condition 31.5a, 31.5b and 31.5c. Perform the necessary maintenance and operation practices following the vendor guidelines to ensure compliance with the oxides of nitrogen and ammonia slip limits.
 - b. Keep records of all SCR system repairs, maintenance, SCR control system adjustments, including time and date.
 - c. Keep records of the system alarm logs including time and date of occurrence.
- 31.5 Emissions Source Testing for Source ID MG-17 with SCR:
- a. Within 60 days after the initial start up of Source ID MG-17 and SCR, conduct a source test on the engine and SCR unit for NOx, O₂ and Ammonia to ascertain compliance with Condition 31.1a and 31.3, in accordance with the requirements set forth in Section 13 of this permit, and as follows:
 - (i) Determine the NOx emission rate, the load curve, the urea reagent concentration, the urea flow rate, fuel consumption rate, and the ammonia slip.

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- (ii) Install exhaust gas sampling ports upstream and down stream of the SCR system for the portable diesel exhaust gas tester instrument and source tests.
 - (iii) Conduct NOx emissions up- and downstream testing concurrently.
 - (iv) Conduct downstream ammonia testing concurrently with the NOx emission test.
 - (v) Sample with hand held analyzer before each run.
 - (vi) Develop hand held analyzer exhaust traverse for each sampling port of no less than three points to ensure representative sampling.
 - (vii) Calculate NOx and ammonia emission rates using Method 19.
 - (viii) The source test shall include the 100% engine load, and no less than three additional load points representing the diesel engine operating range as designed.
- b. Conduct NOx emission samplings each week of operation of Source ID MG-17 to determine the percent SCR NOx emission removal efficiency as set out in condition 31.1a.
- (i) Use for the weekly NOx emission sampling test a MSI 150 diesel engine exhaust gas tester instrument or department approved equivalent.
 - (ii) Measure the oxides of nitrogen, oxygen concentration, stack temperature at sampling ports upstream and downstream of the SCR control at each traverse point.
 - (iii) Record the results from each traverse point. Calculate and record the average percent oxides of nitrogen removal by SCR control. Sum up results from each traverse point and calculate the average concentration upstream and downstream of SCR unit. Calculate the percentage efficiency. Handheld analyzer sampling traverse points must be representative of the exhaust flow.
 - (iv) If the oxides of nitrogen measurements demonstrate that the SCR is achieving less than 85 percent oxides of nitrogen removal, notify the department as set out in condition 77.
- c. Conduct a source test in accordance with condition 31.5a no less than once every 8,000 hours of operation after the initial start up. Conduct NOx emission sampling in accordance with condition 31.5b within 24 hours after catalyst bed replacement, catalyst elements exchange, and changes in the SCR control system, set points, load curve (mapping), urea injection rate.

31.6 Monitoring, recordkeeping, and reporting for Source ID(s) MG-1 through MG-6, MG-17 with SCR control, and MG-18.

- a. For each calendar month, record the hours of operation of each source.
- b. For each calendar month, record the daily urea reagent consumption of Source ID MG-17 with SCR control.
- c. For each calendar month, calculate and record the monthly emissions from Source ID(s) MG-1 through MG-6, MG-17 and MG-18. Use the following equation and emission factors to calculate the monthly NO_x emission rate, M, for each source. The Department, in its discretion, will adjust the emission factors based upon the results of source tests conducted according to the procedures specified in Section 13 of this permit. Upon receiving a written request or approval from the Department, the Permittee shall use the adjusted emission factors.

$M = \text{Emission Factor} \times (\text{hours of operation each month}) \times (1 \text{ ton}/2000\text{lb})$

Emission Factors:

Source MG-1 = 121.3 lbs/hour Source MG-6 = 121.3 lbs/hour

Source MG-3 = 121.3 lbs/hour Source MG-17 (with SCR control) = 18.2 lbs/hour

Source MG-4 = 121.3 lbs/hour Source MG-18 = 121.3 lbs/hour

Source MG-5 = 121.3 lbs/hour

- d. Submit the following records with the Facility Operating Report required by Condition 80:
 - (i) monthly NO_x emissions from Source ID MG-3;
 - (ii) monthly NO_x emissions from Source ID MG-18 when substituting Source ID MG-3;
 - (iii) monthly total NO_x emissions for Source ID(s) MG-1 through MG-6, MG-17 and MG-18;
 - (iv) monthly total NO_x emissions for Source ID(s) MG-1, MG-3, MG-4 and MG-5;
 - (v) monthly NO_x emissions from Source ID MG-17;
 - (vi) weekly percentage (%) of Source ID MG-17 SCR NO_x emissions control efficiency; and

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- (vii) after twelve months of operation, the consecutive 12-month rolling emission rate.

[Cond. 20, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

32. Limit to Avoid PSD for Particulate Matter. To avoid PSD review for particulate matter (PM), the Permittee shall comply with the requirements in this condition to limit the facility's potential to emit.

32.1 Limit particulate emissions from Source ID(s) MG-1 through MG-6 and MG-18 to no greater than 2.6 lb/hr, averaged over three hours.

32.2 Operate as set out in Condition 28.1 and 28.3.

32.3 Report under Condition 77 if Source ID(s) MG-1 through MG-6 and MG-18 exceed the limit in Condition 32.1.

[Cond. 19, Construction Permit No. 0032-AC018 Rev.1, 11/26/02]
[Cond. 21, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
[18 AAC 50.350(g) - (i), 5/3/02]

Section 10. Federal New Source Performance Standards (NSPS) Requirements

- 33. NSPS, Subpart A Notification.** For any affected facility⁹ regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and EPA written or electronic notification in accordance with the applicable requirements of 40 C.F.R. 60.7 and 60.15, Subpart A, 7/1/01
- [18 AAC 50.350(i), 1/18/97 & 18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.7 & 60.15, Subpart A, 7/1/01]
- 34. NSPS Subpart A Performance (Source) Tests.** The Permittee shall conduct initial source tests according to Section 13 and as indicated in this condition on any affected facility within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup, and at such other times as may be required by EPA, and shall provide the Department and EPA with a written report of the results of the source test. The Permittee shall comply with the applicable requirements in 40 C.F.R. 60.8, Subpart A, 7/1/01
- [18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.8, Subpart A, 7/1/01]
- 35. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report.** The Permittee shall comply with 40 CFR 60.7(c) for Source ID(s) MD-2 and MD-3.
- [18 AAC 50.350(i), 1/18/97 & 18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.7(c), Subpart A, 7/1/01]
- 36. NSPS Subpart A Summary Report Form.** The Permittee shall submit reports pursuant to the requirements of 40 CFR 60.7(d) for Source ID(s) MD-2 and MD-3. A summary report form is provided in Attachment A of the Statement of Basis section.
- [18 AAC 50.350(i), 1/18/97 & 18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.7(d), Subpart A, 7/1/01]
- 37. NSPS Subpart A, Monitoring.** The Permittee shall comply with the applicable requirements of 40 CFR 60.13(a), (b), (c), (d)(1), (e)(2), and (f) - (h) for Continuous Monitoring System (CMS) required under Condition 43.2.
- [40 C.F.R. 60.13(a), (b), (c), (d)(1), (e)(2) and (f) - (h), Subpart A, 7/1/01]
- 38. NSPS Subpart A Credible Evidence.** For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 43, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.
- [18 AAC 50.040(a)(1); 8/15/02]
[40 C.F.R. 60.11(g), Subpart A, 7/1/01]

⁹ *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2, effective 7/1/01.

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- 39. NSPS Subpart A, Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Department will determine whether acceptable operating and maintenance procedures are being used based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4.

[18 AAC 50.040(a)(1) & (b)(1), 8/15/02]
[40 C.F.R. 60.11(d) and 61.12(c), Subpart A, 7/1/01]

- 40. NSPS Subpart A Concealment of Emissions.** The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 43. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1) & (b)(2)(a), 8/15/02]
[40 C.F.R. 60.12, Subpart A, 7/1/01]

- 41. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements.** The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4, any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for Source ID(s) MD-2 and MD-3, is inoperative.

[18 AAC 50.350(h), 5/3/02 & 18 AAC 50.040(a)(1), 11/15/02]
[40 C.F.R. 60.7(b), Subpart A, 7/1/01]

Volatile Organic Liquid Storage Vessels (Tanks) Subject to NSPS Subpart Kb

- 42. NSPS Subpart Kb Requirements (Recordkeeping Only).** For Source ID(s) MT-1 through MT-4 the Permittee shall keep readily accessible records for the life of the tank showing the dimensions and an analysis showing the capacity of the tank.

[18 AAC 50.350(h), 5/3/02 & 18 AAC 50.040(a)(2)(M), 8/15/02]
[40 C.F.R. 60.110b(c) and 60.116b(a) & (b), Subpart Kb, 7/1/01]

Metallic Mineral Processing Units Subject to NSPS Subpart LL

- 43. NSPS, Subpart LL.** For sources MD-1 through MD-4, MD-6, and MF-1 through MF-4, the Permittee shall comply with the applicable requirements of the following:

- 43.1 Standard for particulate matter in 40 CFR 60.382;
- 43.2 Monitoring requirements in 40 CFR 60.384;
- 43.3 Reporting and recordkeeping requirements in 40 CFR 60.385, and
- 43.4 Test methods and procedures in 40 CFR 60.386.

[18 AAC 50.040(a)(2)(X), 11/15/02]
[40 C.F.R. 60.382, 60.384, 60.385 & 60.386, Subpart LL, 7/1/01]

Section 11. Insignificant Sources

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant sources that the Department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to these sources.

- 44.** For Source ID(s) MH-1 through MH-4 listed in Table 1, and for other sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

- 44.1 The Permittee shall submit the compliance certifications of Condition 81 based on reasonable inquiry;
- 44.2 The Permittee shall comply with the requirements of Condition 55;
- 44.3 The Permittee shall report in the operating report required by Condition 80 if a source is insignificant because of actual emissions less than the thresholds of 18 AAC 50.335(r) and actual emissions become greater than any of those thresholds;
- 44.4 No other monitoring, recordkeeping or reporting is required, except as required in Conditions 17, 22, 28.3, and 29.

[18 AAC 50.346(b)(1), 5/3/02]

- 45.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process or fuel-burning equipment to reduce visibility through the exhaust effluent by any of the following:

- 45.1 more than 20 percent for a total of more than three minutes in any one hour¹⁰;

[18 AAC 50.50.055(a)(1), 1/18/97]
[40 C.F.R. 52.70, 7/01/01]

- 45.2 more than 20 percent averaged over any six consecutive minutes¹¹.

[18 AAC 50.055(a)(1), 5/3/02]

- 46.** The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard Conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

- 47.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

¹⁰ See Footnote 1.

¹¹ See Footnote 2.

Section 12. *Generally Applicable Requirements*

- 48. NESHAPs Applicability Determinations.** The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures described in 40 CFR 63.1(b). If a source becomes affected by an applicable subpart of 40 CFR 63, Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart.

- 48.1 NESHAPs Subpart A, Recordkeeping.** The Permittee shall maintain records in accordance with §63.10(b)(3).

[40 C.F.R. 63.1(b), 63.6(c)(1) & 63.10(b), Subpart A, 4/5/02]
[18 AAC 50.350(h), 5/3/02; 18 AAC 50.040(c)(1)(A) & (E), 5/3/02]

- 49. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3), 8/15/02 & 50.350(d)(1)(A), 1/18/97]
[40 C.F.R. 61, Subparts A & M, and Appendix A, 7/1/01]

- 50. Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d), 8/15/02 & 50.350(d)(1)(A), 1/18/97]
[40 C.F.R. 82, Subpart F, 7/1/01]

- 51. Ice Fog Standards.** The Department will, in its discretion, require a person who proposes to build or operate an industrial process, fuel-burning equipment, or incinerator in an area of potential ice fog to obtain a permit and to reduce water emissions.

[18 AAC 50.080 & 50.350(d)(1)(D), 1/18/97]
[Cond. 15, Operating Permit No. 9332-AA003 Am. 2, 12/4/96]

- 52. Reasonable Precautions to Prevent Fugitive Dust.** A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.346(c), 5/3/02; 18 AAC 50.045(d) & 50.350(g), 1/18/97 & 18 AAC 50.040(e), 8/15/02]

- 52.1** The Permittee shall comply with the Dust Control (PM Control) Plan prepared August 1999 for the facility or any more recent control plan that has been approved by the Department.

- 52.2** Keep records describing all precautions taken to prevent particulate matter from becoming airborne due to any of the activities described above that are associated with the Concrete Batch Plant (MC-1), all quarry operations (MF-6), and all stockpiles and exposed areas (MF-7). If the precautions taken are not listed in the State Air Quality Control Plan, also record a statement describing why the Permittee finds the precautions to be reasonable. Reasonable precautions, as listed in the State Air Quality Control Plan, include, but are not limited, to

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- a. installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials;
 - b. use of water or chemicals for dust control in the demolition of existing structures, construction operations, road grading, or land clearing; and
 - c. application of asphalt, oil, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces which can create airborne dusts.

52.3 At least once each month, perform a visual survey of air borne particulate matter from the Concrete Batch Plant (MC-1, when in operation), all quarry operations (MF-6), and all stockpiles and exposed areas (MF-7), in accordance with the procedures listed in 40 CFR 60, Appendix A, Reference Method 22.

52.4 Upon discovering that particulate matter emissions are leaving the property, take corrective actions to prevent the emissions from leaving the property.

52.5 Keep contemporaneous records of all surveys performed and corrective actions taken to prevent particulate matter emissions from leaving the Red Dog Mine Ambient Boundary.

52.6 Provide a summary of the records required by this condition with the Facility Operating Report required by Condition 80.

[Cond. 32, Construction Permit 9932-AC005 Rev. 2, 7/16/03]

52.7 For all sources the Permittee shall keep records of

- a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and
- b. any additional precautions that are taken
 - (i) to address complaints described in Condition 52.7 or to address the results of Department inspections that found potential problems; and
 - (ii) to prevent future dust problems.

[18 AAC 50.350(h), 5/3/02]

52.8 The Permittee shall report according to Condition 55.

[18 AAC 50.350(i), 5/3/02]

53. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the Department.

[18 AAC 50.055(g), 1/18/97]

54. Open Burning. The Permittee shall comply with the following requirements when conducting open burning at the facility.

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- 54.1 Only clean lumber and cardboard may be open burned. Quantities open burned for disposal purposes must not exceed 500 lbs/day. Total quantity of open burned clean lumber and cardboard for disposal and fire-fighting training purposes must not exceed 1,500 lbs/week.

[Cond. 33.1, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

- 54.2 **General Requirements.** Except when conducting open burning under 54.8 or 54.9, a person conducting open burning shall comply with the limitations of 54.3 - 54.7 and shall ensure that

- a. the material is kept as dry as possible through the use of a cover or dry storage;
- b. before igniting the burn, non-combustibles are separated to the greatest extent practicable;
- c. natural or artificially induced draft is present;
- d. to the greatest extent practicable, combustibles are separated from grass or peat layer;
- e. combustibles are not allowed to smolder; and
- f. sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the Department, submit copies of the records.

[18 AAC 50.065(a), 1/18/97 & 50.350(g) - (h), 5/3/02]

[Conds. 37.3 & 37.4, Construction Permit 9932-AC005 Rev. 1, 6/10/03]

- 54.3 **Black Smoke Prohibited.** Except for firefighter training conducted under Condition 54.9, open burning of asphalts, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written Department approval. Department approval of open burning as an oil spill response countermeasure is subject to the Department's *In Situ Burning Guidelines for Alaska*, adopted by reference in 18 AAC 50.035. Open burning approved under this subsection is subject to the following limitations:

- a. The person who conducts open burning shall establish reasonable procedures to minimize adverse environmental effects and limit the amount of smoke generated; and
- b. The Department will, in its discretion, as a condition of approval issued under this subsection, require public notice as described in 54.10.

[18 AAC 50.065(b), 1/18/97]

- 54.4 **Toxic and Acid Gases and Particulate Matter Prohibited.** Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, polyurethane products, or batteries in a way that gives off toxic or acidic gases or particulate matter is prohibited.

[18 AAC 50.065(c), 1/18/97]

[Cond. 35.2, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

54.5 Adverse Effects Prohibited. Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

[18 AAC 50.065(d), 1/18/97]

54.6 Air Quality Advisory. Open burning is prohibited in an area if the Department declares an air quality advisory under 18 AAC 50.245, stating that burning is not permitted in that area for that day.

[18 AAC 50.065(e), 1/18/97]

[Cond. 33.2, Construction Permit No. 9932-AC005 Rev. 1, 7/16/03]

54.7 Wood Smoke Control Areas. Open burning is prohibited between November 1 and March 31 in a wood smoke control area identified in 18 AAC 50.025(b).

[18 AAC 50.065(f), 1/18/97]

54.8 Controlled Burning. Controlled burning to manage forest land, vegetative cover, fisheries, or wildlife habitat, other than burning to combat a natural wildfire, requires written Department approval if the area to be burned exceeds 40 acres yearly. The Department will, in its discretion, require public notice as described in 54.10 of this section.

[18 AAC 50.065(g), 1/18/97]

54.9 Firefighter Training: Fuel Burning. Unless a greater quantity is approved by the Department, a fire service may open burn up to 250 gallons of uncontaminated fuel daily and up to 1000 gallons yearly for firefighter training without ensuring maximum combustion efficiency. To conduct this training without prior written Department approval, the fire service shall

- a. provide public notice consistent with 54.10 before burning more than 20 gallons of uncontaminated fuel, unless waived in writing by the Department; and
- b. respond to complaints in accordance with 54.11.

[18 AAC 50.065(i), 1/18/97]

[Cond. 34, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

54.10 Public Notice. A person required to provide public notice of open burning shall issue the notice through local news media or by other appropriate means if the area of the open burning does not have local news media. The public notice must be issued as directed by the Department and must

- a. state the name of the person conducting the burn;
- b. provide a list of material to be burned;

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- c. provide a telephone number to contact the person conducting the burn before and during the burn;
 - d. for a surprise fire drill, state
 - (i) the address or location of the training; and
 - (ii) the beginning and ending dates of the period during which a surprise fire drill may be conducted (this period may not exceed 30 days); and
 - e. for open burning other than a surprise fire drill, state the expected time, date, and location of the open burning.

[18 AAC 50.065(j), 1/18/97]

[Cond. 34.1, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

54.11 Complaints. A person required to provide public notice of open burning shall

- a. make a reasonable effort to respond to complaints received about the burn;
- b. keep, for at least 30 days, a record of all complaints received about the burn, including to the extent feasible
 - (i) the name, address, and telephone number of each person who complained;
 - (ii) a short summary of each complaint; and
 - (iii) any action the person conducting the open burning took to respond to each complaint; and
- c. upon request, provide the Department with a copy of the records kept under 54.11b.

[18 AAC 50.065(k), 1/18/97 & 50.350(g) – (h), 5/3/02]

[Conds. 34.2 & 34.3, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

55. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

55.1 Use the Department approved protocol for assessing changes in vegetation trends at the RWJ Consulting Survey Site W-3 to ascertain whether air contaminant emissions are adversely affecting vegetation. Assess changes in vegetation at Survey Site W-3 during the 2003 season. Notify the Department if significant changes have occurred at any of the 50 micro-plots within the W-3 survey site.

[Cond. 35.1, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

55.2 For the incinerators, Source ID(s) MI-2 and MI-3, do not incinerate materials that give off toxic or acidic gases or particulate matter, as prohibited under Condition 54.4.

[Cond. 35.2, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

- 55.3 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 77.
- 55.4 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 55.
- 55.5 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if
- a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of Condition 55; or
 - b. the Department notifies the Permittee that it has found a violation of Condition 55.
- 55.6 The Permittee shall keep records of
- a. the date, time, and nature of all emissions complaints received;
 - b. the name of the person or persons that complained, if known;
 - c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 55; and
 - d. any corrective actions taken or planned for complaints attributable to emissions from the facility.
- 55.7 With each facility operating report under Condition 80, the Permittee shall include a brief summary report which must include
- a. the number of complaints received;
 - b. the number of times the Permittee or the Department found corrective action necessary;
 - c. the number of times action was taken on a complaint within 24 hours; and
 - d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.
- 55.8 The Permittee shall notify the Department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.346(a)(2), 5/3/02; 50.110, 5/26/72, and 50.040(e), 8/15/02]

- 56. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit. At least once each year, check all ductwork and exhaust systems for leaks. Within seven days of discovering a leak or hole that would appreciably dilute emissions, conduct repairs to eliminate dilution. Keep records of all inspections and repairs performed under this condition. Upon request of the Department, submit copies of the records.

[18 AAC 50.045(a), 1/18/97]

[Cond. 36, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

- 57. Good Air Pollution Control Practice.** At all times, including startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate all sources including associated air pollution control equipment regulated by this permit in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance practices are being used is based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspections of the facility. In addition, the Permittee shall comply with the following limitations:

- 57.1 Develop and provide training at the facility to orient each power plant and coarse ore crushing and conveying operator regarding the applicable terms and conditions of this permit. Maintain a log of the time, date, place, and list of attendees for each training session, and a copy of the materials presented in the training sessions.

[Cond. 37.1, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

- 57.2 Develop and implement standard operation and maintenance procedures for each source listed in Table 1 of this permit. Keep a copy of the procedures available at a location within the facility that is readily accessible to operators of the sources and to authorized representatives of the Department.

[Cond. 37.2, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]

- 57.3 The Permittee shall do the following for Source ID(s) MG-1 through MG-9, MG-11 through MG-22, MI-2, MI-3, SRU-1, and MD-5:

- a. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- b. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;
- c. keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030 & 50.346(b)(2), 5/3/02 & 18 AAC 50.350(f)(2) & (3), 1/18/97]

- 58. HAP Reconstruction.** Before replacing components of either a "major source" as that term is defined in 40 C.F.R. 63.2 or a source that would become a "major source" as a result of replacement, where the cost of replacement exceeds 50 percent of the fixed capital

cost that would be required to construct a comparable new source, but does not exceed 50 percent of the fixed capital cost that would be required to construct the entire facility, the Permittee shall obtain written approval from the Department:

- 58.1 under 40 C.F.R. 63.5(b)(3), (d), and (e), if the source is subject to an emission standard of 40 C.F.R. 63, adopted by reference in 18 AAC 50.040(c)(1)(C), or
- 58.2 in a Notice of MACT Approval under 40 C.F.R. 63.43(f) – (h), if the source is subject to 40 C.F.R. 63.43(a), each adopted in reference by 18 AAC 50.040(c).

[18 AAC 50.346(d), 5/3/02]

- 59. Construction or Modification.** The Permittee shall obtain permit or permit revisions required by AS 46.14 or 18 AAC 50 before constructing or modifying a source. The Permittee shall not construct, operate, or modify a source that will result in a violation of the applicable emission standards or that will interfere with the attainment or maintenance of the ambient air quality standards or maximum allowable ambient concentrations. Keep records of all activities undertaken to construct or modify a source in a manner that would require a permit or permit revisions and any permits, revisions, or approvals obtained as a result of such activities. Upon request of the Department, submit copies of the records.

[Cond. 38, Construction Permit 9932-AC005 Rev. 2, 7/16/03]

- 60. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard¹² listed in Condition(s) 17.1, 18, 21, 22, 28 through 32, 43, and 50, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 77 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 77.

[18 AAC 50.235(a) & 50.350(f)(3), 1/18/97]

- 60.1 under 40 C.F.R. 63.5(b)(3), (d), and (e), if the source is subject to an emission standard of 40 C.F.R. 63, adopted by reference in 18 AAC 50.040(c)(1)(C), or
- 60.2 in a Notice of MACT Approval under 40 C.F.R. 63.43(f) – (h), if the source is subject to 40 C.F.R. 63.43(a), each adopted in reference by 18 AAC 50.040(c).

[18 AAC 50.346(d), 5/3/02]

- 61. Permit Renewal.** To renew this permit, the Permittee shall submit an application under 18 AAC 50.335 no sooner than **June 30, 2007** and no later than **June 30, 2008**.

[18 AAC 50.335(a), 1/18/97]

¹² *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 13. General Source Testing and Monitoring Requirements

- 62. Requested Source Tests.** In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 1/18/97 & 18 AAC 50.345(a) & (k), 5/3/02]

- 63. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

63.1 at a point or points that characterize the actual discharge into the ambient air; and

63.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

- 64. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

64.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A) & 50.350(g), 1/18/97 & 18 AAC 50.040(a), 8/15/02]
[40 C.F.R. 60, 7/1/01]

64.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 8/15/02; 50.220(c)(1)(B) & 50.350(g), 1/18/97]
[40 C.F.R. 61, 7/1/01]

64.3 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9 and may use the form in Section 17 to record data.

[18 AAC 50.030, 5/3/02, 18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

64.4 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 8/15/02 & 18 AAC 50.220(c)(1)(E) & 50.350(g), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/1/01]

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- 64.5 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.
[18 AAC 50.035(b)(2), 7/2/00; 18 AAC 50.220(c)(1)(F) & 50.350(g), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/1/01]
- 64.6 Source testing for emissions of ammonia must be conducted in accordance with methods and procedures for emissions of ammonia in accordance with Bay Area Air Quality Management District (BAAQMD) Source Test Procedure ST-1B, "Ammonia Integrated Sampling" and EPA Method 350.3 "Ion Specific Electrode". The Permittee may use an alternative method approved by the Department.
[Cond. 39.6, Construction Permit No. 9932-AC005 Rev. 2, 7/16/03]
- 64.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.
[18 AAC 50.040(c)(19), 5/3/02 & 18 AAC 50.220(c)(2) & 50.350(g), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 4/5/02]
- 65. Alternate Test Methods.** To the extent allowed by applicable requirements, the Permittee may propose an alternative test method if it can be shown to be of equivalent accuracy, and will ensure compliance with the applicable standards or limits. Until the Department approves an alternative test method requirement, the Permittee shall comply with the requirements listed in this permit.
[Cond. 45, AQC permit 9932-AC005 Rev.1 ~July 2003]
- 66. Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68 °F and an absolute pressure of 760 millimeters of mercury).
[18 AAC 50.220(c)(3), 18 AAC 50.350(g), 1/18/97 & 18 AAC 50.990(88), 5/3/02]
- 67. Test Exemption.** The Permittee is not required to comply with Conditions 69, 70 and 71 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 7.1) or Smoke/No Smoke Plan (Condition 7.2)
[18 AAC 50.345(a), 5/3/02]
- 68. Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.
[18 AAC 50.345(a) & (l), 5/3/02]
- 69. Test Plans.** Except as provided in Condition 67, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. Information that must be included in the test plan is listed in Section 19 of this permit. The
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Permittee shall submit a complete plan within 60 days after receiving a request under Condition 62 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m), 5/3/02]

- 70. Test Notification.** Except as provided in Condition 67, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n), 5/3/02]

- 71. Test Reports.** Except as provided in Condition 67, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 73. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

[18 AAC 50.345(a) & (o), 5/3/02]

- 72. Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Conditions 4, Table 3, 32.1, and 46, the three-hour average is determined using the average of three one-hour test runs.

Section 14. General Recordkeeping, Reporting, and Compliance Certification Requirements

- 73. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.205 and 50.350(b)(3) & (j), 1/18/97; and 18 AAC 50.345(a) & (j), 5/3/02]

- 74. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 80.

[18 AAC 50.350(i), 1/18/97]

- 75. Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200 & 50.350(b)(3), 1/18/97; and 18 AAC 50.345(a) & (i) & 50.350(g) – (i), 5/3/02]

- 76. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.350(h), 5/3/02]

76.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

76.2 for sources regulated by 40 CFR 60, Subparts A, Kb and LL, records consistent with any recordkeeping requirements set out in the applicable provisions of 40 CFR 60, Subparts A, Kb, and LL.

[Cond. 50.2, AQC permit 9932-AC005 Rev. 1 6/10/03]

76.3 records of all monitoring required by this permit, and information about the monitoring including:

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- a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
 - b. sampling dates and times of sampling or measurements;
 - c. the operating conditions that existed at the time of sampling or measurement ;
 - d. the date analyses were performed;
 - e. the location where samples were taken;
 - f. the company or entity that performed the sampling and analyses;
 - g. the analytical techniques or methods used in the analyses; and
 - h. the results of the analyses.

77. Excess Emissions and Permit Deviation Reports.

77.1 Except as provided in Condition 55, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable;
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;
- c. report all other excess emissions and permit deviations
 - (i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in Conditions 77.1c(ii);
 - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 77.1c(i); and

77.2 When reporting excess emissions, the Permittee must report using either the Department's on-line form, which can be found at <http://www.state.ak.us/dec/dawq/aqm/eeform.pdf>, or if the Permittee prefers, the form contained in Section 19 of this permit. The Permittee must provide all information called for by the form that is used.

77.3 When reporting a permit deviation, the Permittee must report using either the Department's on-line form, which can be found at <http://www.state.ak.us/dec/dawq/aqm/eeform.pdf>, or if the Permittee prefers, the form contained in Section 19 of this permit. The Permittee must provide all information called for by the form.

77.4 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), & 50.350(i), 1/18/97; and 18 AAC 50.346(a)(3), 5/3/02]

78. NSPS and NESHAP Reports. The Permittee shall:

78.1 attach to the facility operating report required by Condition 80, copies of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 as required by Condition(s) 33, 43.3, and 48; and

78.2 upon request by the Department, notify and provide a written copy of any EPA-granted waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules.

[18 AAC 50.040, 8/15/02 & 18 AAC 350(i)(2), 1/18/97]
[40 C.F.R. 60 & 63, 7/1/01]

79. Recording Devices Malfunctions on Non-operations. If any recording device required by this permit, including fuel consumption meters, kWh meters, or operating hour indicator/recorders, is malfunctioning or nonoperable for three or more days, the Permittee shall notify the Department by telephone and in writing on the fourth day, indicating the cause of the failure and the anticipated time required to repair or replace the instrument. These reports shall be summarized in writing and submitted along with the facility operating report required by Condition 80.

[18 AAC 50.350(h), 8/15/02 & 18 AAC 350(d)(1)(D), 1/18/97]
[Cond. 25, Operating Permit No. 9332-AA003, Am. 2, 12/4/96]

80. Operating Reports. During the life of this permit, the Permittee shall submit to the Department one original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

80.1 The operating report must include all information required to be in operating reports by other Conditions of this permit.

80.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 80.1, either

- a. The Permittee shall identify
 - (i) the date of the deviation;

-
- (ii) the equipment involved;
 - (iii) the permit condition affected;
 - (iv) a description of the excess emissions or permit deviation; and
 - (v) any corrective action or preventive measures taken and the date of such actions; or

- b. When excess emissions or permit deviations have already been reported under Condition 77 the Permittee may cite the date or dates of those reports.

80.3 The operating report must include a listing of emissions monitored under Conditions 5.3 and 7 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report

- a. the date of the emissions;
- b. the equipment involved;
- c. the permit condition affected; and
- d. the monitoring result which triggered the additional monitoring.

[18 AAC 50.346(b)(3), 5/3/02; 18 AAC 50.350(d)(4), 6/21/98 and 18 AAC 50.350(f)(3) & (i), 1/18/97]

81. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an original and two copies of an annual compliance certification report as follows:

[18 AAC 50.350(j), 1/18/97]

81.1 For each permit term and condition set forth in Section 4 through Section 14, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 6/21/98]

- a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;
- b. state whether compliance is intermittent or continuous;
- c. briefly describe each method used to determine the compliance status; and
- d. notarize the responsible official's signature.

[18 AAC 50.205, 1/18/97 & 50.345(a) & (j), 5/3/02]

81.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j)(3), 1/18/97]

Section 15. Standard Conditions Not Otherwise Included in the Permit

- 82.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

82.1 an enforcement action;

82.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

82.3 denial of an operating-permit renewal application.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (c), 5/3/02]

- 83.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (d), 5/3/02]

- 84.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (e), 5/3/02]

- 85.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are

85.1 included and specifically identified in the permit; or

85.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (b), 5/3/02]

- 86.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (f), 5/3/02]

- 87.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (g), 5/3/02]

- 88.** The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

88.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

-
- 88.2 have access to and copy any records required by the permit;
 - 88.3 inspect any facility, equipment, practices, or operations regulated by or referenced in the permit; and
 - 88.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (h), 5/3/02]

Section 16. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, Condition 89 of this permit contains the requirements determined by the Department not to be applicable to the Red Dog Mine Facility. Condition 90 shows the permit shield requests that have been denied.

- 89.** Table 4 identifies the sources that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table 4 becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, obtaining a construction permit and/or an operating permit revision.

Table 4 - Permit Shields Granted.

Source ID	Non-Applicable Requirements	Reason for non-applicability
All	40 CFR 60, Subparts B, C ,Ca, Cb, Cc, Cd, D, Da, Db, E, Ea, Eb, F, G, H, I, J, K, Ka, L, M, N, Na, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AAa, BB, CC, DD, EE, GG, HH, KK, MM, NN, PP, QQ, RR, SS, TT, UU, VV, WW, XX, AAA, BBB, DDD, FFF, GGG, HHH, III, JJJ, KKK, LLL, NNN, PPP, QQQ, RRR, SSS, TTT, UUU, VVV, and WWW	No affected sources within facility nor is it an affected facility, operation or industry.
MH-1 through MH-3	40 CFR 60, Subpart Dc –Standards for small boilers	These boilers were installed in 1988. To be applicable they would have to have been installed after June 9, 1989.
MT-1 through MT-4	40 CFR 60, Subpart Kb, subsections 60.112b, 60.113b, 60.114b, & 60.115b	The maximum true vapor pressure of the VOL is below the regulating criteria
MD-2 and MD-3	40 CFR 60, Subpart LL, subsections 60.382(a)(2)	MD-2 & MD-3 are wet scrubbers so the 7% opacity limit does not apply.
MD-5	40 CFR 60, Subpart LL	The baghouse does not control metallic mineral emissions. It controls dust from nonmetallic reagent mixing.
All sources except for mobile crusher	40 CFR 60, Subpart OOO, standards for nonmetallic mineral processing	No affected sources within facility other than the rock crusher, which is authorized under other permits.
MD-1, MD-4, MD-6, MF-1 through MF-4 and MF-6	40 CFR 60, Subpart A, subsections 60.7(a)(5) and (7)	Continuous monitoring system not required for these sources
All	40 CFR 61 Subparts A, B, C, D, F, H, I, J, K, L, M, N, O, Q, R, T, V, W, Y, BB, and FF	No affected sources within facility nor is it an affected facility, operation or industry.
MI-2 & MI-3	40 CFR 61 Subpart E	The incinerators do not process mercury ore, use mercury chlor-alkali cells, or incinerate or dry wastewater treatment plant sludge.
All	40 CFR 63 Subparts, F, G, H, I, L, M, N, O,	No affected sources within facility nor is it

Source ID	Non-Applicable Requirements	Reason for non-applicability
	Q, R, T, W, X, Y, CC, DD, EE, GG, II, JJ, KK, OO, PP, QQ, RR, and VV	an affected facility, operation or industry.
MI-2 through MI-3	18 AAC 50.050(a)(1) – incinerator emission standards	18 AAC 50.050(a)(1) doesn't exist in new regulations, 5/3/02
MI-2 through MI-3	18 AAC 50.050(b) – sludge incineration doesn't exist in new regulations, post 5/3/02	The incinerators do not incinerate sludge from a municipal wastewater treatment that serves 10,000 + persons
MI-2 through MI-3	18 AAC 50.050(b) – grain loading standards	The incinerators are rated at less than 1000 lb/hr total
MI-2 through MI-3	40 CFR 60, Subpart O	The incinerator's waste feed does not contain more than 10% sewage sludge (dry basis).
All	18 AAC 50.055(a)(2)	The sources were not described in cited regulations or in operation before November, 1982
All	18 AAC 50.055(a)(3), (4), (5), (6), (7), (8) and (9)	Facility has no sources as described in cited regulations.
All	18 AAC 50.055(b)(2), (3), & (4)	Facility has no sources as described in cited regulations.
All	18 AAC 50.060 – Pulp mills	Facility has no sources as described in cited regulations.
All	18 AAC 50.070 – Marine Vessel emission	No marine vessels at facility
All	18 AAC 50.075– wood fired heating device	Facility has no sources as described in cited regulations.
MD-2, MD-3, & MF-2 through MF-7	18 AAC 50.055 – industrial process	These conveyors are not an industrial process. These fugitive sources are not an industrial process.
MF-8 & MF-9	18 AAC 50.055 – industrial process	Open burning is not an industrial process.
MT-1 through MT-4	40 CFR 60, Subpart Kb, 60.112b, 60.113b, 60.114b, & 60.115b.	The vapor pressure of the diesel fuel in the tanks is below the regulated level
	18 AAC 50.085 & 50.090 VOL storage & loading	Tanks and piping are not located in the port of Anchorage
Open burning	NOx PSD avoidance Owner Requested Limits	Fugitive emissions & fugitives do not count as part of a facility's potential to emit.
MG-1 through MG-6	1988 BACT determination	The 1988 BACT determination has been superseded by the BACT determination in permit 9932-AC005 Revision 1.
MC-1	40 CFR 60, Subpart OOO	No crushing or grinding occurs in the batch plant.
Wastewater treatment plant	18 AAC 50	The wastewater plant is not an air emission source.

[18 AAC 50.350(l), 1/18/97]

90. The following table shows permit shield requests that are denied and the reasons for denial.

Table 5. - Permit Shields Denied.

Source ID	Request for Shield From:	Reason for Denial
Sources subject to NSPS	Notification and recordkeeping requirements in 40 CFR 60, Subpart A have been satisfied	Satisfaction of these requirements does not make them non-applicable.
Sources subject to NSPS	The source testing requirement in 40 CFR 60.8	Satisfaction of these requirements does not make them non-applicable.
Facility wide	40 CFR 82, Subparts B and F	These Subparts are effective for all freon containing equipment.
Facility wide	18 AAC 50.080 - Ice Fog Standards	The Arctic is an area of potential ice fog.
MD-4	18 AAC 50.055 – Industrial process	Grinding, which is an industrial process, occurs in the Assay lab.

Section 17. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company &
Facility:

Location:

Test No.:

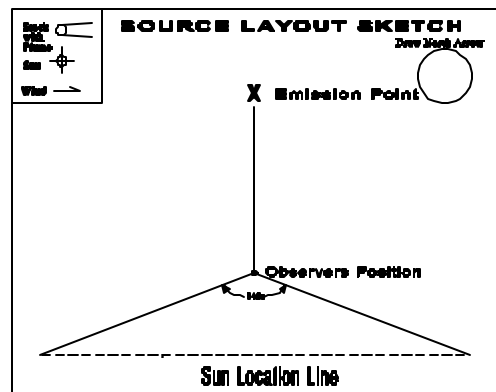
Date:

Source:

Production Rate/Operating Rate:

Unit Operating Hours:

Hrs. of observation:



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Page ____ of ____

Company & Facility _____ Certified Observer _____

Test Number _____ Clock time _____

[illegible]

Additional information:

Observer Signature and Date

Certified By and Date

Duration of Observation Period (minutes) _____ Duration Required by Permit (minutes) _____

Number of Observations _____ Highest Six –Minute Average Opacity (%) _____

Number of Observations exceeding 20 % _____

In compliance with three-minute aggregate opacity limit? (Yes or No) _____

In compliance with six-minute opacity limit? (Yes or No) _____

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 18. SO₂ Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO₂ using the following equations:

$$A = 31,200 \times [\text{wt}\%S_{\text{fuel}}] = 31,200 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$B = 0.148 \times [\text{wt}\%S_{\text{fuel}}] = 0.148 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$C = 0.396 \times [\text{wt}\%C_{\text{fuel}}] = 0.396 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$D = 0.933 \times [\text{wt}\%H_{\text{fuel}}] = 0.933 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$E = B + C + D = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$F = 20.9 - [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] = 20.9 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$G = [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] \div F = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$H = 1 + G = 1 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$I = E \times H = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\text{SO}_2 \text{ concentration} = A \div I = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ppm}$$

The wt%S_{fuel}, wt%C_{fuel}, and wt%H_{fuel} are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to Condition 5.1. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%_{dry}O_{2, exhaust}) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if wt%S_{fuel} = 1.0%, then enter 1.0 into the equations, not 0.01, and if vol%_{dry}O_{2, exhaust} = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c), 5/3/02]

Section 19. ADEC Source Test Plan Form

The following form requires information that must be included in a source test plan. This form can be found at <http://www.state.ak.us/local/akpages/ENV.CONSERV/dawq/aqm/stpforn.pdf>.

ADEC Source/Performance Test Plan Summary Form

For EACH source being tested, attach a completed version of this form to the source test plans that are submitted to ADEC within 30 to 60 days prior to testing.

Name of Permittee

Facility Name

1. Reason for the Source/Performance Test:

- ☐ Permit Requirement: Provide the following information.

Permit # _____ Application # _____

Condition _____

Deadline for Completion of Source Testing: _____

- ☐ ADEC Request: Provide the following information.

Type of request: circle one of the following.

COBC NOV Letter Email Verbal Other (describe below)

If COBC or NOV, provide # _____

Date of the Request: _____

Deadline for Completion of Source Testing: _____

2. Source/Performance Test Information:

Source ID No.	
Source Name	
Air Pollution Control Device Being Tested	
Scheduled Testing Dates	
Pollutants Measured	
Reference Methods	
Number of Tests	
Test Conditions (Operational Loads)	
Number of Runs per Test Condition	
Duration of Each Test Run	

3. **Alternative Test Plans** (these require administrator approval): Detail proposed deviations from reference method protocol.

-
4. **Sample Port Location:** Attach a longitudinal section drawing of the test stack indicating the diameter or if the stack is rectangular, the cross sectional dimensions and the distances from the sampling ports to upstream and downstream disturbances.
 5. **Traverse Point Locations for Velocity, Particulate, and Other Sampling:** Attach cross sectional drawings indicating the sampling sites with distances given for velocity, particulate, and other measurements.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name

Signature

Date

Section 20. ADEC Notification Form

Fax this form to: (907) 269-4589 Telephone: (907) 269-8888

Teck Cominco Alaska, Incorporated
Company Name

Red Dog Mine Facility
Facility Name

Reason for notification:

☐ **Excess Emissions**

*If you checked this box
Fill out section 1*

☐ **Other Deviation from Permit Condition**

*If you checked this box
fill out section 2*

When did you discover the Excess Emissions or Other Deviation:

Date: __/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock):

	START Time: (hr:min):	END Time:	Duration
Date: _____	_____:	_____:	_____:
Date: _____	_____:	_____:	_____:
		Total:	_____:

(b) Cause of Event (Check all that apply):

<input type="checkbox"/> START UP	<input type="checkbox"/> UPSET CONDITION	<input type="checkbox"/> CONTROL EQUIPMENT
<input type="checkbox"/> SHUT DOWN	<input type="checkbox"/> SCHEDULED MAINTENANCE	<input type="checkbox"/> OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

☐ YES ☐ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

☐ YES ☐ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation
_____	_____
_____	_____
_____	_____

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____

Signature: _____

Date: _____

Alaska Department of Environmental Conservation

Air Permits Program

November 10, 2003

Teck Cominco Alaska, Incorporated

Red Dog Mine Facility

STATEMENT OF BASIS

of the terms and conditions for

Permit No. 290TVP01

Prepared by Jack Coutts and Grace M. Germain

INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. 290TVP01.

FACILITY IDENTIFICATION

Section 1 of Operating Permit No. 290TVP01 contains information on the facility as provided in the Title V permit application.

The facility is mostly owned and operated by Teck Cominco Alaska, Incorporated, and Teck Cominco Alaska, Incorporated is the Permittee for the facility's operating permit.

The Red Dog Mine Facility is engaged in zinc and lead mining activities from an open pit mine. Ore containing lead and zinc is milled to produce lead and zinc in a powder form. The facility consists of a quarry, an overburden stockpile, an ore crushing operation, an ore stockpile, a concentrating mill, a concentrate stockpile, and a concrete truck loading facility. Support facilities include fuel storage tanks, a power generating system, a wastewater treatment facility, a service/office complex, a personnel accommodations complex (PAC), a construction camp, refuse incinerators, a concrete batch plant, a rock crusher, maintenance shops, an airport, the tailings pond, and a storage yard. The emissions sources in the Mine Site covered under this permit are 26 diesel electric generators (5 of which are nonroad engines), 3 standby oil-fired heaters and 43 small heaters (consolidated under one Source ID, MH-4), 2 incinerators, 4 baghouses, 2 scrubbers on ore or concentrate conveyors, 9 miscellaneous fugitive sources, 1 concrete batch plant, and 4 diesel fuel storage tanks. The SIC code for this facility is 1031.

SOURCE INVENTORY AND DESCRIPTION

Table 1 of Operating Permit No. 290TVP01 contains information on the sources regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Section 2 of Operating Permit No. 290TVP01 contains emission information as provided in the Title V application. A summary of the potential to emit (PTE)¹³ and assessable PTE as indicated in the application from the Red Dog Mine Facility is shown in the table below.

¹³ *Potential to Emit or PTE* means the maximum quantity of a release of an air contaminant, considering a facility's physical or operational design, based on continual operation of all sources within the facility for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on the capacity of the facility's sources or the facility to emit an air contaminant, including limitations such as restrictions on hours or rates of operation and type or amount of material combusted, stored, or processed as defined in AS 46.14.990(21), effective 1/18/97.

Table A - Emissions Summary, in Tons Per Year (TPY)

Pollutant	NO _x	CO	PM	SO ₂	VOC (non- HAP)	HAP-VOC	Pb	Total
PTE	4021	371	346	243	162	230	1.5	5375
Assessable PTE	4021	371	346	243	162	230	0	5373

The assessable PTE listed under Condition 1.1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 TPY. The emissions listed in Table A are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the facility.

For the listed pollutants, except for HAP, emissions are as provided in the Technical Analysis Report for Construction Permit No. 9932-AC005, Revision 1. The HAP emission is from the 1997 application and the resulting increase in PTE for Ammonia (NH₃) when operating MG-17 with SCR, as permitted in Revision 2.

BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 of Operating Permit No. 290TVP01 lists the regulatory classifications of the Red Dog Mine Facility.

This facility is classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in 18 AAC 50.300(c)(1) because it has the potential to emit 250 tpy or more of a regulated air contaminant in an area designated as attainment or unclassifiable for that air contaminant. It is also classified as a HAC major facility under 18 AAC 50.300(f) because it has the potential to emit 10 TPY or more of any single HAC or 25 TPY or more in the aggregate of two or more HACs. It is also classified under 18 AAC 50.300(b)(1)(A) because it contains a source that must have an air contaminant control unit and is an industrial process with a total rated capacity greater than five tons/hr. It is classified under 18 AAC 50.300(b)(3) because it contains incinerators with a total combined rated capacity greater than 1000 lbs/hr.

This facility requires an operating permit under:

- 18 AAC 50.325(b)(1) because it emits 100 TPY or more of a regulated pollutant;
- 18 AAC 50.325(b)(2) because it has the potential to emit 10 TPY or more of a hazardous air contaminant or 25 TPY or more, in the aggregate, of two or more hazardous air contaminants;
- 18 AAC 50.325(b)(3) because it contains sources subject to the standards adopted by reference in 18 AAC 50.040(a); and
- 18 AAC 50.325(c) because it is within the category of facilities subject to AS 46.14.130(b)(4).

Alaska regulations require operating permit applications to include identification of “regulated sources.” As applied to Red Dog Mine Facility, the state regulations require a description of:

- ⇒ Each incinerator, including a demonstration showing each requirement in 18 AAC 50.050, Incinerator Emissions Standards, that applies, under 18 AAC 50.335(e)(4)(A);
- ⇒ Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under 18 AAC 50.335(e)(4)(C);
- ⇒ Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and
- ⇒ Sources subject to requirements in an existing Department permit 18 AAC 50.335(e)(5).

The emission sources at Red Dog Mine Facility classified as “regulated sources” according to the above Department regulations are listed in Section 3 of Operating Permit No. 290TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit issued for this facility is permit-to-operate number 9332-AA003 Amendment 2. This permit-to-operate include all construction authorizations issued through October 26, 1994, since it was issued before January 18, 1997. All facility-specific requirements established in this previous permit are included in the new operating permit as described in Table B.

Construction Permits

Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005 Rev. 2 was issued to this facility on November 26, 2002 and on July 16, 2003, respectively. The facility-specific requirements established in these construction permits are included in the new operating permit as described in Table C.

Title V Operating Permit Application History

The owner or operator submitted an application on December 8, 1997.

Additional information was received in December 2002.

Subsequent information on revisions to Construction Permit Nos. 0032-AC018 and 9932-AC005 were received in 2003.

COMPLIANCE HISTORY

The facility has operated at its current location since 1989. Review of the permit files for this facility, which includes the past inspection reports, indicate that the facility had been issued a Notice of Violation. This was the result of the joint ADEC and EPA inspection in August 2000,

where numerous violations on the air quality control permit conditions were noted. Subsequently, a settlement agreement was reached on 12/17/2001, which included both a large fine and Supplemental Environmental Projects (SEPs). An inspection conducted in August 2002 concluded that Teck Cominco had corrected all the alleged violations and had begun the SEP's.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

Operating Permit

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) requires that an operating permit include each facility-specific requirement established in a prior operating permit. Table B below lists the permit conditions established in a permit issued under former 18 AAC 50.400 or in any other construction permit issued under 18 AAC 50. Table B below lists the requirements carried over from 9332-AA003 Amendment 2, as amended through December 4, 1996, into Operating Permit No. 290TVP01.

Table B - Comparison of Pre-January 18, 1997 Permit No. 9332-AA003 Amendment 2 Conditions to Operating Permit No. 290TVP01 Conditions¹⁴

Permit No. 9332-AA003 Amendment 2 Condition number	Description of Requirement	Permit No. 290TVP01 Condition Number	How condition was revised/why it is not included
Exhibit A	Source Inventory	Section 3	Updated the list based on new information from most recent construction permits, Nos. 0032 AC018 Rev. 1 & 9932-AC005 Rev. 2.
1	Notification requirement for new sources.	None	Similar requirements already incorporated in Condition 59.
2	If on-site construction has not begun within 18 months of the issuance date of this permit,...	None	Not carried forward. Requirement already fulfilled for the sources covered by this condition.
3 and Exhibit B	Permittee shall comply with the State Ambient Air Quality Standards and increments established in ... and Exhibit B (Operational Limitations).	3 - 5, 17, 18, 20, 21, 22, & 23	These limitations have been carried in the operating permit conditions based on the applicable current SIP standards and construction permit Nos. 0032-AC018 Rev. 1, 11/26/02 and 9932-AC005 Rev. 2, 7/16/03.
4 & 5	Permittee shall maintain and operate, in accordance with ... to provide optimum control of air contaminant emissions and to meet PM limits...	57	Replace with the standard condition language adopted on 5/3/02 and the corresponding requirements from Permit No. 9932-AC005 Rev. 1.
6, Exhibit B (Part F), Exhibit C (Test Methods), and Exhibit D (item 4)	Sulfur limits and MR&R	5.1, 5.2, & 17	Changed the sulfur content limit to from 0.25% to 0.16% averaged over any consecutive 12-month period, as revised in Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005, Rev.2. Carried the MR&R language from the standard condition adopted 5/3/02.
7 & 8, Exhibit B (Parts A & I), Exhibit C (Test Methods), and Exhibit D (item 3)	Used Oil Management Standards	None	Conditions not carried forward because the requirements are not covered under the air permits program.
9 & Exhibit B (Part A)	Disposal of used oil or	None	Condition not carried forward because the

¹⁴ This table does not include all standard and general conditions

Permit No. 9332-AA003 Amendment 2 Condition number	Description of Requirement	Permit No. 290TVP01 Condition Number	How condition was revised/why it is not included
	hazardous waste, 18 AAC 60 & 62, or 40 CFR 261		requirement is not covered under the air permits program.
10 & Exhibit B	Operational limit for Source ID(s) MG-1, MG-3, MG-4 & MG-5	None	Rescinded the operational limit of 109,660,000 kWh/year and replaced with 2,259 tpy cumulative NOx emission limit in the Construction Permit 9932-AC005.
11 & Exhibit B	Operational limit for Source ID(s) MG-7, MG-8, & MG-9	28.3e	Same operational limit.
12 & Exhibit B (Part A)	Operational hour limits for Source ID(s) 9 (MG-10) and 16 (MXG-100)	28.3b, 20.1	Same operational hour limits.
13 & Exhibit B (Part A)	Operational hour limit for Source ID 58 (Kelly Hoskinson Incinerator)	None	Not Carried forward. The Kelly Hoskinson incinerator is no longer onsite.
14 & Exhibit B (Part A)	Operational hour limit for Source ID MD-4 (Mikropul 49S8-20)	None	Hours of operation was increased in the Construction Permit No. 9932-AC005 from 6750 to 8760 hours per year.
16 & 17 and Exhibit D (item 6)	Fugitive Dust Control	52	Replaced with the standard condition language adopted on 5/3/02 and the corresponding requirements from Permit No. 9932-AC005 Rev. 1.
18 and Exhibit F	Ambient Air Quality monitoring – Install and maintain signs to prohibit public access ...	16 & Section 8	Superseded by the requirements in Permit No. 9932-AC005 Rev. 2.
20	Perform source tests for NOx, CO and opacity on one of the new Wartsila diesel electric generators...	None	Not carried forward. Requirements already fulfilled.
25	Reporting requirements for recording device when it is malfunctioning or non-operable.	79	No change.
27	General recordkeeping requirements	76	Record retention is now five years per regulation. Standard condition.
Exhibit D (item 1)	Operating time for each source and kWh for generators	28.3 & 29.4	Revised, as required in Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005 Rev.2.
Exhibit D (item 2)	Fuel consumption and type	6.1 & Table 2	Applies only to Source ID(s) MG-7, MG-8, MG-9, MG-14 MG-15, MG-16, MG-19 and MG-20 for the purpose of monitoring “insignificant” thresholds for these sources.
Exhibit D (item 5)	Amount and category of Solid waste	54	Requirement is carried forward in association with the Open Burning conditions.

Construction Permits

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) requires that an operating permit include each facility-specific requirement established in a prior construction permit. Table C below lists the construction permit condition that established a requirement in Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005 Rev. 2, revised through November 26, 2002 and July 16, 2003, respectively and the new condition in Operating Permit No. 290TVP01 that carries the old requirement into the new permit.

Table C - Comparison of Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005 Rev. 2 Conditions to Operating Permit No. 290TVP01 Conditions¹⁵

Condition number in Permit No.		Description of Requirement	Permit No. 290TVP01 Condition Number	How condition was revised
0032-AC018 Rev. 1	9932-AC005 Rev. 2			
Section 7	Section 10	Source inventory	Section 3	Updated the list based on new information from most recent construction permits, Nos. 0032 AC018 Rev. 1 & 9932-AC005 Rev. 2, and 9/03/03 Letter Request for Administrative Revision on Source ID MG-11.
	10 & Section 15	Public Access Control Plan	16 & Section 8	Similar requirements. Removed obsolete requirements.
10 & 11	11 & 12	No modification without notification	None	Similar requirements already incorporated in Condition 59.
12 & 17	13 & 18	SO ₂ requirements: Fuel sulfur limits & MR&R	5, 17, & 29	Same limits and requirements.
13 & 18	14, 19, & 20	NO _x requirements	18, 30, & 31	Adopted the combined NO _x limit for Sources MG-1 through MG-6, MG-17 (with and without SCR) and MG-18. Rescinded the NO _x source test requirements for Source ID MG-18 (already fulfilled).
	15	Fugitive particulate matter requirements	19	Similar requirements.
14	16	Nonroad engines (MXG-100, MG-23, MG-24, & MG-25) requirements	20, 29.4, & 29.1	Similar requirements, except rescinded the obsolete Conditions 14.2 through 14.7 of Construction Permit No. 0032-AC018 Rev. 1. Added MR&R requirements for MXG-100 operational-hour limit
15		Stack parameter requirements for Source ID(s) MG-1 through MG-6, MG-17 and MG-18.	21	Condition applies only to Source ID 17. Requirements already fulfilled for the other sources.
16	17	ORL to avoid PSD for Carbon Monoxide for Source ID(s) MG-1 through MG-6, MG-17 and MG-18.	28	Similar limits and requirements.
19	21	ORL to avoid PSD for Particulate Matter for Source ID(s) MG-1 through MG-6 and MG-18	32	Similar limit and requirements, except rescinded Condition 19.4 of Construction Permit No. 0032-AC018 Rev. 1 requiring source test for Source ID MG-18 (requirement already fulfilled).

¹⁵

This table does not include all standard and general conditions

Condition number in Permit No.		Description of Requirement	Permit No. 290TVP01 Condition Number	How condition was revised
0032-AC018 Rev. 1	9932-AC005 Rev. 2			
	22	NOx BACT limits, source tests and reporting requirements	22.1, 22.2, 22.3, and Table 3	No source tests required for MG-1, MG-3, MG-4, and MG-5. NOx source tests requirements already fulfilled for these sources. The construction commencement notification requirement for Source ID MG-17 is rescinded; already fulfilled.
	23	VE and PM BACT limits and source tests and reporting requirements	22.4 through 22.7, and Table 3	Did not include PM source test requirements for Source ID(s) MG-11 through MG-16, MG-19 through MG-21, MI-3, MD-1 through MD-4, MD-6, MF-2, MF-3, and MF-4 because these requirements were already fulfilled. Did not include PM requirements for the Rock Crusher (Source ID MF-12) under Condition 23.6 because the source is covered under General Permit No. 9.
	Section 6	NSPS Requirements	Section 10	Similar requirements; different format. Removed NSPS Subpart OOO requirements; this applies to Source MF-11 and MF-12, which are not covered under this permit.
	30 & 31	SIP emission standards (VE, PM & SO ₂) and MR&R	3, 4, 5, & Section 6	Incorporated standard condition language adopted 5/3/02. Removed PM source testing required for Sources MG-1 through MG-6 and VE surveillance for Sources MG-19, MG-20, & MG-21; requirements already fulfilled.
20	32	Bulk materials handling...	52	Carried forward facility-specific requirements. Incorporated standard condition language adopted 5/3/02.
21	35	Air pollution prohibited.	48	Carried forward facility-specific requirements. Incorporated standard condition language adopted 5/3/02.
	33	Open Burning	54	Carried forward facility-specific requirements.
23	37	Good Air Pollution Control Practice	57	Carried forward facility-specific requirements. Incorporated standard condition language adopted 5/3/02.
24	38	Construction or Modification	59	Similar requirements.
	39.6	Source testing for emissions of ammonia.	53	Similar requirements.
35	50.2	Recordkeeping requirements for NSPS sources	76.2	Removed recordkeeping requirements pertaining to 40 CFR 61, Subparts A & E in Construction Permit No. 9932-AC005 Rev. 2. (No sources under this permit regulated by 40 CFR 61).
	52	BACT reanalysis	23	Same requirements.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. 290TVP01.

Conditions 1 and 2, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the **potential** to emit any air contaminant identified in the permit, including those not specifically limited by the permit. For example, methanol emissions from drilling losses are assessable emissions because they are a hazardous air contaminant, even if there is currently no emission limit on methanol for that type of operation.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted whether or not the permit contains any limitation of that contaminant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the facility, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on "potential to emit" (PTE).

The PTE set forth in the condition is based on liquid fuel with a sulfur content of 0.16 percent by weight. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content. The change in these values may result in SO₂ emissions that could trigger PSD.

Condition 3 and Section 6, Visible Emissions Standard

Applicability: This regulation applies to operation of all fuel-burning equipment and industrial sources in Alaska. Source ID(s) MG-1 through MG-9, MG-11 through MG-22, MI-2, MI-3, SRU-1, MF-1, MC-1, MD-1, and MD-4 through MD-6 are such equipment.

Factual Basis: Condition 3 requires the Permittee to comply with the federal and the state visible emission standards applicable to fuel-burning equipment and incinerators. The Permittee shall not cause or allow the equipment to violate these standards.

This condition has recently been adopted into regulation as a standard condition. MR&R requirements are listed in Section 6 of the permit.

Liquid Fuel-Fired Sources, Incinerators, and Industrial Process Equipment:

Monitoring – The visible emissions may be observed by either Method-9 or the Smoke/No Smoke plans as detailed in Section 6. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Insignificant Sources:

According to Topic #3 of Policy Guidance No. AWQ 02-014, 4/2/02, emission sources that do not qualify as insignificant because of an operational limit but otherwise have potentially insignificant emissions are not subject to visible and PM emissions monitoring requirements, but are subject to the compliance certification requirements. Source ID(s) MG-7, MG-8, MG-9, MG-11 through MG-16, MG-19 through MG-22, MD-1, MD-4, MD-5, and MD-6 fall under this category. For these sources, for as long as they do not exceed the insignificant source emissions thresholds in 18 AAC 50.335(r)(2), the sources are not subject to visible emissions monitoring. Monitoring of fuel consumption and PM emissions, as provided in Conditions 6.1 and 6.2, is required. See statement for Condition 6.

Condition 4, and Section 6, Particulate Matter (PM) Standard

Applicability: The PM standard applies to operation of all fuel burning and industrial process equipment in Alaska. The affected sources in this facility are Source ID(s) MG-1 through MG-9, MG-11 through MG-22, SRU-1, MF-1, MC-1, MD-1, MD-4, MD-5, and MD-6. The SIP standard for PM applies because it is contained in the federally approved SIP dated October 1983. Condition 32 is an owner-requested limit from the previous permits.

Factual Basis: Condition 4 requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

MR&R requirements are listed in Section 6 of the permit.

Liquid Fuel-Fired Sources and Industrial Process Equipment:

Monitoring – The Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

For Source ID MC-1, PM monitoring in Section 6 is not possible (and therefore not required) because the source does not have exhaust outlets. The monitoring requirements set out in Condition 52 (Reasonable Precautions to Prevent Fugitive Dust) should suffice compliance assurance monitoring with the SIP PM emission standard for this source.

Source MF-1 consists of Mill Building exhausts and vents, which are free convection outlets that have reversible flow, so they cannot be source tested. Annual compliance certification with the particulate matter standard is required. The Department recognizes the fact that there is a correlation between opacity and particulate matter emissions. Hence, for other fuel-burning and industrial process equipment, PM source testing is triggered depending on the results of visible emissions observations. Since PM monitoring is waived for MF-1, compliance with the visible emissions standard should also satisfy compliance with the PM standard.

Recordkeeping - The Permittee is required to record the results of PM source tests.

Reporting - The Permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, 2) and results of PM source tests. The Permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Insignificant Sources:

According to Topic #3 of Policy Guidance No. AWQ 02-014, 4/2/02, emission sources that do not qualify as insignificant because of an operational limit but otherwise have potentially insignificant emissions are not subject to visible and PM emissions monitoring requirements, but are subject to the compliance certification requirements. Source ID(s) MG-7, MG-8, MG-9, MG-11 through MG-16, MG-19 through MG-22, MD-1, MD-4, MD-5, and MD-6 fall under this category. For these sources, for as long as they do not exceed the insignificant source emissions thresholds in 18 AAC 50.335(r)(2), the sources are not subject to particulate matter emissions monitoring. Monitoring of fuel consumption and PM emissions, as provided in Conditions 6.1 and 6.2, is required. See statement for Condition 6.

Condition 5, Sulfur Compound Emissions

Applicability: The sulfur compound emissions standard applies to operation of all fuel-burning and industrial process equipment in Alaska. Source ID(s) MG-1 through MG-9, MG-11 through MG-22, SRU-1, and MF-1 are fuel-burning and industrial process equipment that have the potential to emit sulfur compound emissions. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983.

Factual Basis: The condition requires the Permittee to comply with the sulfur compound emissions standard applicable to fuel-burning and industrial process equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

The facility is subject to a PSD avoidance limit (to avoid classification under 18 AAC 50.300(h)(3)) of 0.45 percent sulfur content by weight in liquid fuels. This limit has been incorporated into Condition 5.1 as compliance assurance monitoring for SO₂ emissions because it is more stringent than what is normally allowable (0.75 percent sulfur). Fuel

containing no more than 0.75 percent sulfur by weight in liquid fuel will always comply with the emission standard. The fuel sulfur limit for liquid fuel combusted at the facility (and associated MR&R) will verify compliance. For fuels with a sulfur content higher than 0.75 percent, the condition requires the Permittee to use Section 18 to calculate the sulfur-dioxide concentration using the equations to show that the standard is not exceeded.

Recordkeeping - For Diesel fuel the Permittee is required to record the fuel sulfur content or fuel grade of each shipment and all material balance calculations, and for fuel gas, the H₂S concentration of the fuel gas.

Reporting – The Permittee is required to report as State excess emissions whenever the fuel combusted causes sulfur compound emissions to exceed the standards in this condition. The Permittee is required to include the material balance calculations for fuel oil in the excess emissions report.

The Permittee is required to include copies of the records mentioned in the previous paragraph with the facility operating report.

Condition 6, Emissions and Fuel Usage Thresholds for Small and Backup Sources

Applicability: Condition 6 applies to Source ID(s) MG-7, MG-8, MG-9, MG-11 through MG-16, MG-19 through MG-22, MD-1, MD-4, MD-5, and MD-6 because these sources may be classified as insignificant based on actual emissions under 18 AAC 50.335(r) but not per 18 AAC 50.335(q)(1)(B)(ii).

Factual Basis: These “insignificant” sources are listed in the operating permit because they are subject to operational restrictions in order to meet BACT limits and to avoid PSD classification under 18 AAC 50.300(h)(3). In accordance with Topic #3 of Policy Guidance No. AWQ 02-014, 4/2/02, for as long as Source ID(s) MG-7, MG-8, MG-9, MG-11 through MG-16, MG-19 through MG-22, MD-1, MD-4, MD-5, and MD-6 do not exceed the insignificant emission thresholds in 18 AAC 50.335(r), they are exempt from the visible emissions and particulate matter MR&R requirements in Section 6. The monitoring requirements for fuel usage and PM emissions in Conditions 6.1 and 6.2 will indicate if the sources exceeded the emissions threshold values for the criteria pollutants, as listed in 18 AAC 50.335(r).

Conditions 7 - 15 (Section 6), Visible Emissions and PM Monitoring Plan

Applicability: Applies because these conditions detail the monitoring, recordkeeping, and reporting required in Conditions 3 and 4. Sources that do not have sufficient emissions to be above insignificant emission levels do not have to be monitored until their fuel consumption causes their actual NO_x emissions to reach 2 TPY.

Factual Basis: For diesel engines, the NO_x emission will not reach 2 TPY until 6,618 gallons of fuel has been consumed. For boilers, the consumption of 1 ton of fuel sulfur creates 2 tons of SO₂. The formula to compute the amount of fuel sulfur consumed assumes a fuel density of 7.1 pounds per gallon. If the actual fuel density is known, that value should replace the 7.1 value.

Each permit term and condition must include MR&R requirements showing verifiable compliance with each permit term and condition. The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Facility

Operation and Maintenance Program, that the facility is in continuous compliance with the State's emission standards for visible emissions and particulate matter.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid fuel fired sources. Equipment types covered by these conditions are internal combustion engines, heaters, and boilers. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Monitoring frequencies for hydrocarbon fuels, are detailed in these conditions. Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Conditions 16 - 22 (Section 7), Ambient air quality standards, maximum allowable ambient concentrations, and BACT limits

Applicability: Apply because these are facility-specific requirements that were carried forward from previous operating and construction permits.

Factual Basis: This Section contains terms and conditions to ensure that allowable emissions from the facility and associated growth will not cause an ambient concentration that exceeds the concentrations established in Table 6 of 18 AAC 50.310(d)(2) at any location that does not or would not meet the ambient air quality standard or maximum allowable ambient concentration. Also, terms and conditions for BACT for NO_x, SO₂ and PM are included.

Condition 16 requires the Permittee to comply with the Public Access Control Plan required in Section 8 and allows revision requests for the Plan. See statements for Conditions 24 through 27.

Conditions 17 through 22 provide the requirements to ensure compliance with the BACT limits and ambient air quality standards established in the construction permits.

Condition 23, BACT Reanalysis

Applicability: Applies because this permit has conditions established as a result of a BACT analysis.

Factual Basis: If the sources subject to the BACT analysis are not installed within 18 months of permit issue date, a new BACT analysis may need to be conducted.

Conditions 24 - 27, Public Access Control Plan

Applicability: Apply because the facility ambient air boundary has not been well marked in the past.

Factual Basis: This requirement is adopted from Construction Permit No. 9932-AC005 Rev. 2. The Public Access Control Plan is required because of the hazardous nature of the activities involved in the facility.

Conditions 28 - 32, Owner Requested Limits to Avoid a PSD Review

Applicability: The Permittee has requested the operating limits to keep the facilities increase in potential emission of CO, NO_x, SO₂ and PM to less than the values in 18 AAC 50.300(h)(3)(B) to avoid the requirement for a PSD review.

Factual Basis: The Permittee has conducted an analysis of the facility's fuel burning equipment and determined what limits on operating hours and power output are required to limit emissions. Condition 28 limits simultaneous operation of the larger diesel generators and imposes a pound per hour CO emission limit. The conditions for limiting NO_x, SO₂, and PM adopt some of the same limits as in Condition 28.3. These conditions require the Permittee to monitor power output, fuel consumption, or operating hours and to compute monthly emissions.

Conditions 33 - 41, NSPS Subpart A Requirements

Applicability: The Department has incorporated by reference the NSPS effective July 1, 2001, for specific industrial activities, as listed in 18 AAC 50.040.

Most (with the exception of some storage tanks) sources subject to an NSPS are subject to Subpart A. At this facility, Source ID(s) MD-1 through MD-4, MD-6, MF-1 through MF-4 and MT-1 through MT-4 are subject to NSPS Subparts LL and Kb and are therefore subject to Subpart A.

Condition 33 - The Permittee has already complied with the notification requirements in 40 C.F.R. 60.7 (a)(1) - (4) for Source ID(s) MD-1 through MD-4, MD-6, MF-1 through MF-4, and MT-1 through MT-4. However, the Permittee is still subject to these requirements in the event of a new NSPS source or reconstruction of one of these sources.

Condition 34 - The Permittee is required to comply with the initial performance test requirements in 40 C.F.R. 60.8 for Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4, in accordance with 40 C.F.R. 60.386, Subpart LL.

Conditions 35 and 36 - NSPS excess emission reporting requirements and summary report form in 40 C.F.R. 60.7(c) & (d) are applicable to Source ID(s) MD-2 and MD-3 because these sources are required to use continuous monitoring system, in accordance with 40 C.F.R. 60.384. The Department has included in Attachment A of the statement of basis a copy of the federal EEMSP summary report form for use by the facility.

Condition 37 - Monitoring requirements in 40 C. F. R. 60.13 are applicable to Source ID(s) MD-2 and MD-3 because a CMS is used to determine compliance with Subpart LL emission standards.

Condition 38 - states that any credible evidence may be used to demonstrate compliance or establishing violations of relevant NSPS standards for Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4.

Condition 39 - Good air pollution control practices in 40 C.F.R. 60.11 are applicable to all NSPS sources subject to Subpart LL (Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4).

Condition 40 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4.

Condition 41 - Start-up, shutdown, or malfunction record maintenance requirements in 40 C.F.R. 60.7(b) are applicable to all NSPS sources subject to Subpart A.

Recordkeeping requirements in 40 C.F.R. 60.7(f) are applicable to all NSPS sources.
(Satisfied by condition 73)

Factual Basis: Subpart A contains the general requirements applicable to all affected facilities (sources) subject to NSPS. In general the intent of NSPS is to provide technology-based emission control standards.

Condition 42, NSPS Subpart Kb Requirements (Recordkeeping Only)

Applicability: NSPS Subpart Kb applies to sources that were built or modified after July 23, 1984. Source ID(s) MT-1 through MT-4 were installed/modified in 1988 - 2001. Source ID(s) MT-1 through MT-4 have storage capacities of greater than 151 m³ and store volatile organic liquids (VOLs) with maximum true vapor pressure of less than 3.5 kPa (0.5 psia). According to 40 C.F.R. 60.116b(b), these tanks are subject to **only** the recordkeeping requirements in Subpart Kb.

Factual Basis: This condition incorporates Subpart Kb recordkeeping requirements. Because the condition is a permanent recordkeeping condition, no monitoring or reporting is required to ensure compliance with these federal requirements.

Condition 43 NSPS, Subpart LL Requirements

Applicability: The Permittee shall comply with the applicable provisions of 40 CFR 60, Subpart LL – Standards of Performance for Metallic Mineral Processing Plants as the standards apply to the Primary Jaw Crusher (Source MD-1), the #1 Coarse Ore Conveyor (Source MD-2), the #2 Coarse Ore Conveyor (Source MD-3), the Assay Lab Bucking Room (Source MD-4), the Gyratory Crusher (Source MD-6), the Mill building exhausts and vents (Source MF-1), the Truck Unloading Station at the primary crusher drop box (Source MF-2), the Truck Unloading Station at the gyratory crusher drop box (Source MF-3), the Mine CSB and the truck loading station (Source MF-4).

Factual Basis: This condition incorporates the Subpart LL opacity standards. The Permittee may not cause or allow Sources MD-1 through MD-4, MD-6, and MF-1 through MF-4 to violate these standards.

Conditions 44 - 47, Insignificant Sources

Applicability: These general emission standards apply to all industrial processes, fuel-burning equipment, and incinerators regardless of size.

Factual Basis: The conditions re-iterate the general standards and require compliance for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

Source ID(s) MH-1 through MH-4 listed in Table 1 are “insignificant” sources per 18 AAC 50.335(t)(7) but not per 18 AAC 50.335(q)(1)(B)(ii). These sources are subject to

operational limits in order to comply with the ambient air quality standards, BACT limits and to avoid PSD classification, as established in previous permits.

Condition 44 requires certification that the sources did not exceed state emission standards during the previous year and did not emit any prohibited air pollution.

State air quality regulations adopted effective May 3, 2002 allow for an average six minute opacity observation. The existing regulation, limiting opacity to no more than 20% for more than 3 minutes in any one hour, is included because EPA Region X has not formally approved the changed opacity regulation as part of Alaska's State Implementation Plan (SIP).

Condition 48, NESHAPS Applicability Determinations

Applicability: The Permittee has the responsibility to determine if specific federal regulations apply to its facilities.

Factual basis: The Permittee has conducted an analysis of the facility and determined that it is a major HAPs facility based on methanol emissions. This condition requires the Permittee to keep and make available to the Department copies of the major facility determination.

Condition 49, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 50, Refrigerant Recycling and Disposal

Applicability: Applies if the Permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F, that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Condition 51, Ice Fog Standards

Applicability: Applies because it is a general condition for facilities that operate within an area identified as a potential source of ice fog that may reduce visibility during winter months.

Factual Basis: The condition is included in this permit to reiterate that the Department will, in its discretion, require the Permittee to reduce water emissions from a source causing the ice fog, if it becomes a safety concern.

Condition 52, Reasonable Precautions to Prevent Fugitive Dust

Applicability: Bulk material handling requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Condition 53, Stack Injection

Applicability: Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 54, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the facility.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility. The Permittee requested and has been allowed by the Department to conduct open burning and firefighter training under certain provisions, as described in Conditions 54.1 and 54.9

No specific monitoring is required for this condition. Condition 54.2f requires the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through Condition 55, which requires a record of complaints.

Condition 55, Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the facility because the facility will have emissions.

Factual Basis: The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the Department.

The Department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

Condition 56, Dilution

Applicability: This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 57, Good Air Pollution Control Practice

Applicability: Applies to all sources, **except** NSPS regulated sources, i.e., except Source ID(s) MD-1 through MD-4, MD-6, and MF-1 through MF-4.

Factual Basis: The condition requires the Permittee to comply with good air pollution control practices for all sources.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the Department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 58, Hazardous Air Pollutant (HAP) Reconstruction

Applicability: Applies to the facility because the facility is a hazardous air pollutant-(HAP) major facility as described in 18 AAC 50.300(f).

Factual Basis: The condition requires the Permittee obtain written approval from the Department before reconstructing a HAP-major source. Pre-construction approval for reconstructing a HAP-major source is a requirement of the Clean Air Act. Alaska's construction permit program does not require a construction permit for reconstructing a source, only for reconstructing a facility. Therefore, this condition is a standard condition in all HAP-major facility operating permits.

Condition 59, Construction or Modification

Applicability: Applies to the facility because the facility requires a permit.

Factual Basis: The condition requires the Permittee to obtain written approval from the Department before reconstructing or modifying a major source. Pre-construction approval for reconstructing a major source is a requirement of the Clean Air Act. Alaska's construction permit program does not require a construction permit for reconstructing a source, only for reconstructing a facility.

Condition 60, Technology-Based Emission Standard

Applicability: Technology Based Emission Standard requirements apply to the facility because the facility contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other "technologically feasible" determinations.

Factual Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with Condition 77. Excess emission reporting under Condition 77 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 77.

Condition 61, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: The Permittee is required to submit an application for permit renewal by the specific dates applicable to Red Dog Mine Facility as listed in this condition. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal.

Condition 62, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The Permittee is required to conduct source tests as requested by the Department. Monitoring consists of conducting the requested source test.

Conditions 63 - 66, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: The Permittee is required to conduct source test as set out in Conditions 63 through 66. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 63 through 66 consist of the test reports required by Condition 71.

Condition 67, Test Exemption

Applicability: Applies when the source exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 68 - 71, Test Deadline Extension, Test Plans, Notifications and Reports

Applicability: Apply because the Permittee is required to conduct source test by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with this condition.

Condition 72, Particulate Matter (PM) Calculations

Applicability: Applies when the Permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a regulatory requirement for PM source tests. This condition supplements specific monitoring requirements stated elsewhere in this permit.

Condition 73, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the reporting requirements of this permit.

Condition 74, Submittals

Applicability: Applies because the Permittee is required to send reports to the Department.

Factual Basis: This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit.

Condition 75, Information Requests

Applicability: Applies to all Permittees, and incorporates a standard condition.

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the Department. Monitoring consists of receipt of the requested information.

Condition 76, Recordkeeping Requirements

Applicability: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide an evidence of compliance with this requirement.

Condition 77, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The reports themselves and the other monitoring records required under this permit provide monitoring of whether the Permittee has complied with the condition. Please note that there may be additional federally required excess emission reporting requirements.

Condition 78, NSPS and NESHAP Reports

Applicability: Applies to facilities subject to NSPS and NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 63. The reports themselves provide monitoring for compliance with this condition.

Condition 79, Recording Devices Malfunctions on Non-operations

Applicability: Applies because this is a facility-specific reporting requirement carried forward from previous Operating Permit No. 9332-AA003.

Factual Basis: The condition provides specific reporting requirements to the Department that the Permittee has to fulfill in cases of malfunctions or non-operation of recording devices used to monitor operations of sources subject to air quality standards or limits. The reports themselves provide monitoring for compliance with this condition.

Condition 80, Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

Condition 81, Annual Compliance Certification

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. The reports themselves provide monitoring for compliance with this condition.

Conditions 82 - 88, Standard Conditions

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required for all operating permits.

Condition 89 and 90, Permit Shield

Applicability Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Table 4 of Operating Permit No. 290TVP01 shows the permit shields that the Department granted to the Permittee. The permit conditions set forth the requirements that the Department determined were not applicable to the facility. Table 5 shows the requests that were denied and the reasons why they were denied. The Department based the determinations on the permit application, past operating permit, construction permits and inspection reports.

Attachment A

Figure 1: Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One - SO₂/NO_x/TRS/H₂S/CO/Opacity)

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation _____

Address: _____

Monitor Manufacturer and Model No. _____

Date of Latest CMS Certification or Audit _____

Process Unit(s) Description: _____

Total source operating time in reporting period¹ _____

Emission data summary ¹		CMS performance summary ¹	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period reporting period due to:	
a. Startup/shutdown		a. Monitor equipment malfunctions	
b. Control equipment problems		b. Non-Monitor equipment malfunctions	
c. Process problems		c. Quality assurance calibration	
d. Other known causes		d. Other known causes	
e. Unknown causes		e. Unknown causes	
2. Total duration of excess emission		2. Total CMS Downtime	
3. Total duration of excess emissions X (100) /[Total source operating time]	% ²	3. [Total CMS Downtime] X (100) /[Total source operating time]	% ²

¹ For opacity, record all times in minutes. For gases, record all times in hours.

² For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in this condition shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

Name

Title

Signature

Date